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THE CURRICULUM: ORGANIZATION
AND DEVELOPMENT

AMERICAN EDUCATIONAL RESEARCH ASSOCIATION

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The Curriculum: Organization and Development

Reviews the literature for the three-year period since the issuance of
Vol. XXI, No. 3, June 1951

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This issue of the REVIEW was prepared by the Committee on
Curriculum: Organization and Development

WILLIAM M. ALEXANDER, *Chairman*, University of Miami, Coral Gables,
Florida

WILLIAM H. BRISTOW, Board of Education, New York, New York

ARTHUR W. FOSHAY, Ohio State University, Columbus, Ohio

PAUL M. HALVERSON, Syracuse University, Syracuse, New York

A. HARRY PASSOW, Teachers College, Columbia University, New York,
New York

J. GALEN SAYLOR, University of Nebraska, Lincoln, Nebraska

KIMBALL WILES, University of Florida, Gainesville, Florida

with the assistance of

JOHN H. GREEN, Ohio State University, Columbus, Ohio

WOODROW SUGG, University of Florida, Gainesville, Florida

PAUL TREATMAN, Board of Education, New York, New York

INTRODUCTION

THIS issue of the REVIEW covers the research in the general field of curriculum organization and development appearing since the issue of June 1951 (Vol. XXI, No. 3), entitled "The Curriculum: Learning and Teaching." The committee has found a somewhat larger number of contributions to the general literature than to a body of research in the field, and it may be that the chief value of the present issue is to point up the need for a more significant effort on the part of educators to undergird their curriculum theories and practices with specific research studies.

Altho there are many reports of practices and expositions of theories which committee members have considered sufficiently meritorious to review herein, the authors of each chapter have commented on the lack of research bearing on the problems of curriculum organization and development concerned. Thus, in "Factors Influencing Curriculum Development," Wiles and Sugg state that "the research of the past three years has not produced the answers to some of the major questions in this area." In his chapter on "Design of the Curriculum," Saylor concludes that "the paucity of definitive research on curriculum design is apparent from the above review." Bristow and Treatman in their chapter on "Teaching Materials" comment that "the research on teaching materials is just beginning." Altho he found a rather large body of material on "Organization and Procedures for Curriculum Improvement" (Chapter IV), Passow notes that "much of the literature described proposed or existing programs and plans with less attention to reports of systematic testing of a particular kind of organization to determine its value in facilitating improvement."

Only with regard to the problem of "Participation in Curriculum Development" (Chapter V), did the author note some recent increase in research. This author, Halverson, points out that "in the past decade more attention has been given in the literature to the specific outcomes of participation." The authors of the chapter on "Technics of Curriculum Research" cite recent reviews of studies on research technics in the REVIEW and other sources, and then do a significant service in synthesizing the needs of and suggestions for curriculum research found in the literature. However, these authors conclude that "the literature shows more concern with speculation regarding what research should be about than with how it should be done."

Altho one would not expect to find a comprehensive body of research produced during a single three-year period to deal with all these problems, it is rather discouraging to find so little research conforming to specifications of the REVIEW which deals with any of the problems. It is hoped, therefore, that this issue of the REVIEW will be helpful in providing a synthesis of the literature on curriculum organization and development

appearing during the period, and that it may also suggest major lines of research needed. Each chapter, and especially that on technics, offers pertinent materials to the growing body of educators who are attempting to discover ways and means of working together to solve curriculum uncertainties and difficulties on the basis of evidence, that is, to carry on cooperative curriculum research.

WILLIAM M. ALEXANDER, *Chairman*
Committee on Curriculum:
Organization and Development

CHAPTER I

Factors Influencing Curriculum Development

KIMBALL WILES and WOODROW SUGG

CURRICULUM development is influenced by a multitude of factors. Social conditions, the efforts of community groups and parents, foundations, professional associations and agencies, colleges and universities, state departments of education, and local school improvement programs were examined in the research during the past three years.

Social Conditions

The international situation has influenced the curriculum. The Educational Policies Commission (47) advised that the regular school program must be expanded to include types of experiences useful in preparation for military life for those youth who have yet to go into the service. The Federal Civil Defense Administration (17) developed standard curriculums for use in schools, while the strategic position occupied by schools in the national security program was portrayed by Sanford, Hand, and Spalding (59). A survey of more than 4000 school systems made by the NEA Research Division (46) found that the mobilization and defense efforts have produced numerous changes and adjustments in the curriculum of the public schools. They were: (a) increased tempo of curriculum revision; (b) more emphasis on vocational work; (c) marked increase in programs of physical education; (d) increased emphasis on social studies; and (e) expansion of training in first aid and safety, science, commercial offerings, and home economics.

The Educational Policies Commission (48) recommended that education for citizenship provide pupils with an opportunity to learn why the United States is following a policy of international cooperation and to gain understanding of UNESCO and other United Nations agencies. But implementation of this proposal met opposition (5). National problems, such as the high accident rate, the monetary policy, and tensions between social groups, have led to attempts to influence the school curriculum. Stanley (64) noted the efforts of organized interest groups to secure change in the policies of public education which would promote their conception of public welfare, and the diverse and often conflicting nature of the demands of those groups.

The impact of social conditions may be observed in the study by Graves (22). He found in his study of 10 years of change in secondary education that additions in social studies revealed increased emphasis on human relations, the world picture, and contemporary problems, as well as a realistic approach to family life education. Two yearbooks (6, 42) contended

that aspects of our present culture—world power struggles, mobility of population, prejudices and discrimination—are producing tension and fears which vitally affect the needs of children and youth. The Thirty-First Yearbook of the American Association of School Administrators (3) went further and predicted that the curriculum of the public schools will be increasingly affected by the rapidly mounting complications of economic and social life in the last half of the current century.

Another factor in the current social scene which affected the program of the public schools was the rapid growth in school population and resulting overcrowded conditions (47, 51). The NEA Research Division (45) reported that class size is out of hand in some instances and that basic educational values are being sacrificed to serve sheer numbers. A survey of school facilities (68) concluded that the school buildings erected in the past, which must continue in use because of overcrowding, are not adaptable to the educational programs of today.

Influence of Laymen

Parents and laymen are playing an active role in curriculum development. From a recent study of the operational beliefs of community leaders, Kimbrough (34) concluded that an important task of educational leaders is to provide for the cooperative development of educational policy. This practice has been attempted. Larsen (36) found more than 8000 citizens committees in action thruout the country in 1953. Beggs (8), Hamlin (23, 24), and Toy (67) described the activities of citizens groups. Hand (25) reported that local studies led to curriculum revision and that such studies are now extensively found.

Citizens' reactions to the public schools (52) and the work of lay advisory councils (29) were surveyed. A composite report of 85 school-community study groups in Connecticut (65) found that the studies of curriculum and teaching were among the undertakings of many of the groups. Ostrander (54) found that laymen made valuable contributions to the development of the school curriculum. Many of the larger cities provided for citizens' participation in curriculum planning (56, 57).

Individuals and organizations have criticized the presentday program of public education. The Anti-Defamation League of B'nai B'rith (39) published a description of the work of certain groups. A section of the 1953 Yearbook of the American Association for Curriculum Development (5) depicted the activities of a few nationally organized groups as well as local groups which have promoted suspicion of public education. The slogans, publications, executives, and the nature of the activities of 10 organizations were summarized by Skaife (61). Alberty and others (1) labeled the actions as attacks and reported their source and nature. Bestor (9) and Fuller (20) are examples of individuals who have found many aspects of the curriculum of the public schools unsatisfactory. Hulburd (28) described the conflict in Pasadena. Demaree (15) discussed byproducts of the attacks on schools.

Several foundations have financed and made possible research studies which have been of help to curriculum builders. The General Education Board (21) aided state universities and state departments of education in developing supervisory services, in improving inservice educational programs for teachers, and by promoting educational research and experimentation. The Kellogg Foundation sponsored a nationwide cooperative study of the leadership role of school administrators; one of the projects was reported by Ramseyer (58). The Detroit Citizenship Study (38) was financed by the William Volker Charities Fund, and the Russell Sage Foundation (31) recently made possible a study of elementary-school objectives. The Sloan Foundation (66) promoted the project in applied economics which was carried out by the universities of Florida, Kentucky, Vermont, and West Virginia.

Influence of Educators

Professional organizations have sought to promote curriculum development by compiling research findings and by publishing bulletins and yearbooks which raise issues and point out possible next steps for public-school education. Some of the recent yearbooks which have been concerned with the school program were: *American School Curriculum* (3), *Action for Curriculum Improvement* (4), *Forces Affecting American Education* (5), *Bases for Effective Learning* (44), *Adapting the Secondary School Program to the Needs of Youth* (49), and *The Community School* (50). Professional associations have attempted to stimulate research and the sharing of results. The Association for Supervision and Curriculum Development (2) took steps to encourage cooperative curriculum research and to serve as a clearinghouse.

Accrediting agencies have sought to influence the curriculum thru developing better evaluation procedures. The *Evaluative Criteria* developed by the Cooperative Study of Secondary School Standards has been used extensively thruout the country. A follow-up study one year after use of the criteria showed that curriculum and other changes were being made as an outgrowth of their use (7). The Southern Association of Colleges and Secondary Schools (62, 63) developed criteria which were used in the evaluation of elementary schools.

Colleges and universities. The curriculum of the public schools, particularly on the secondary level, has been influenced by college entrance requirements. The proportion of young people attending colleges in America has increased steadily, especially since the turn of the century (27), thereby increasing the importance of college entrance requirements for secondary schools. Many colleges and secondary schools have begun to work together in attempts to develop mutually satisfactory college entrance requirements (53). A report prepared by the Committee on High School-College Relations of the North Central Association (55) listed some of the principal causes of dissatisfaction with high school-college relations

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from the point of view of both secondary-school authorities and college officials. This report also summarized certain cooperative attempts of colleges and secondary schools to work on college entrance requirements: the Eight-Year Study, the Southern Study, the Michigan Agreement, the Illinois Curriculum Program, and on-going cooperation in other states.

Emanuel's study (16) of college entrance requirements 10 years after the Eight-Year Study concluded: (a) college entrance requirements are apparently not dominating the high-school curriculum to the extent that they have been charged with doing, (b) many colleges have adapted their program to changing secondary-school curriculums, (c) the college success of veterans of World War II has been a significant factor in liberalizing admission policies in the past decade, and (d) there is a possibility that the indirect influences of the Eight-Year Study have been much stronger than the direct ones.

Fowler (19) found that a large proportion of secondary schools continue to have a rather fixed curriculum for their college preparatory pupils in spite of indications of a more hospitable attitude on the part of colleges toward a secondary curriculum designed to meet the individual and local needs. The colleges of the North Central Association (53) agreed that carefully conducted and well-supervised experimentation for curriculum development is desirable.

Curriculum revision in the public schools is beginning to have the cooperation, the active support, and, in many cases, the leadership and direct help of colleges. Pattillo and Stout (55) showed that colleges have been and still are encouraging curriculum development in the public schools. Shriner (60) found that colleges and universities are assisting public schools by: (a) organizing courses around specific problems of individual schools or school systems; (b) conducting off-campus workshops for individual schools or school systems; (c) participating in research, study, and publication of programs of school study councils; (d) preparing materials that schools can use in making studies of the strengths and weaknesses of their educational programs and helping interpret and use these findings; (e) sponsoring conferences to assist teachers, administrators, and supervisors with professional problems; (f) providing staff members to assist state departments of education with statewide curriculum improvement programs; and (g) providing individual consultants or teams of consultants to work with schools over extended periods of time on various phases of their curriculum improvement programs.

Several organizations sponsored by colleges have fostered curriculum study in the public schools by serving as consulting or coordinating agencies. Harvard's Center for Field Studies (26) extended such aid to a number of schools. Teachers College, Columbia University, coordinated research in the Metropolitan School Study Council (40). Consulting services and other help were extended by several colleges to the Illinois Curriculum Program (30). Wayne University aided in the Detroit Citizenship Study (38). The Horace Mann-Lincoln Institute at Teachers College (41)

unified and coordinated action research carried out in a large number of schools. Other universities and colleges provided similar services but have not published descriptions of their programs during this three-year period.

Kelley (33) described Wayne University workshops for school personnel and reported that the most effective types of workshops are those that attack the problems which are of direct concern to the school workers and also that workshops may be more successful if freed from college course restrictions altho still giving credit.

State departments of education. The National Council of Chief State School Officers (43) reported that state departments provided leadership to continuing programs of curriculum study by preparing guides and bulletins, and by furnishing consultant services. Carpenter (11) described how a state course of study is constructed. Some state handbooks continued to outline standards of attainment necessary for accreditation of a school by the state department of education.

Local School Improvement Programs

At the local level, the Association for Supervision and Curriculum Development (4) reported that significant changes in the professional staff resulted from cooperative curriculum planning. Inservice and workshop planning promoted cooperative methods of working together. Three types of school workshops were reported by Lammel (35) as being extensively used. These were summer workshops, inservice workshops during the regular school year, and preschool workshops. She found that local workshops resulted in improved human relations; developed group activity in attacking the educational problems of the local community; and provided opportunities for teachers, supervisors, consultants, administrators, parents, and youth to plan and make significant changes in school practice. Vickery (69) found more "team work" in one type of workshop today than in those held a decade ago.

Curtis (14) identified the increased use of educational consultants by professional groups as one of the important developments of the past decade. Lawler (37) described the role of the consultant in curriculum improvement, and Blaha (10) proposed ways in which consultants' services could be effectively used. Kearney (32) reported that administrators can speed curriculum progress by: (a) using research results, (b) developing new concepts of leadership and accepting teachers as professional workers, and (c) working with the public rather than fearing it. Cooperative procedures in curriculum planning have been extended to include pupils in studies reported by Cowan (13); Foshay (42); Meier, Cleary, and Davis (38); and Miel and others (41).

Enriched secondary-school offerings resulted from consolidation of schools. The U. S. Office of Education (18) sponsored an eight-state study which found that 72.9 percent of the secondary schools in reorganized districts had added courses and services to their programs. In-

dustrial arts, homemaking, music, agriculture, driver education, business education, and art were the most often reported course additions; expanded services included testing, visual aids, central library, and health services. Chisholm and Cushman (12) found that the smaller schools usually provided distinctly less desirable school programs than those provided by larger schools. Woodham (70) found that larger secondary schools made more courses available to students and provided more educational services.

Needed Research

The research of the past three years has not produced the answers to some of the major questions in this area. Carefully designed, definitive studies are needed to investigate the effect of social conditions and professional activities on the curriculum. Some problems on which only scanty evidence is available are: Is the rate of curriculum change increased by world, national, and community crises? Does public criticism of the public schools hinder curriculum improvement? Do the activities of congressional investigating committees decrease curriculum change? Which pressure groups have been effective in securing curriculum change? Does increased heterogeneity in a community stimulate curriculum change? Has the increased mobility of the population resulted in a more uniform curriculum? Has the increase in the number of homes in which both parents work produced an expansion of the curriculum? Has television changed the content of the curriculum? Is curriculum improvement associated primarily with increased financial support of the schools?

Does money spent by a foundation to encourage special types of curriculum improvement produce any lasting change in local school systems? Do publishing companies speed or retard curriculum improvement? Do citizens committees facilitate or impede curriculum improvement? Do association yearbooks or statements of national commissions stimulate curriculum change? Do state or systemwide curriculum bulletins produce improvement in the curriculum? Which types of inservice activities develop readiness for curriculum change? Are certain types of educational leadership more effective than others in promoting curriculum change? Do research activities result in curriculum improvement? Do published reports of research studies stimulate curriculum change? Are certain types of curriculum structure more responsive to societal changes than are other types?

Until more than hypotheses are developed in these areas, curriculum improvement will progress on a trial and error basis.

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CHAPTER II

Design of the Curriculum

J. GALEN SAYLOR

LITTLE definitive research on the design of the curriculum has appeared since the comparable issue of the REVIEW three years ago. Curriculum design does not readily lend itself to the research methods employed by the biometricians or the sociometricians, and the newer trend to action research has not been apparent in the area of curriculum organization. In spite of the lack of research studies on this fundamental educational problem, a number of important treatises appeared during the period. Most of these publications are based on theoretical considerations and expound points of view and philosophical considerations rather than research findings per se. Curriculum planning must necessarily always involve philosophical considerations, and so these publications make significant contributions to the literature of curriculum designing.

The Nature of Curriculum Design

Herrick (24) gave curriculum workers a definition of curriculum design and a series of propositions on the essential characteristics of design. He stated that design: (a) defines the elements that enter into curriculum planning and their pattern of relationships, (b) shows the methods used for selecting and organizing learning experiences, and (c) indicates the role that teachers and pupils are to take in curriculum planning. Design, he maintained, must provide every teacher with answers to essential questions on the nature of the curriculum. His 11 propositions emphasized the fact that design must provide the basis on which learning experiences are planned, selected, and organized, and must indicate the direction of pupil growth.

Mackenzie (35) described five methods of organizing the curriculum—subjects, broad fields, areas of living, the core, and children's interests and needs—but stated that the actual learning experiences themselves are the essential consideration. The over-all organization of the curriculum may affect the nature of the experiences, of course, but nevertheless experiences of many types may occur within the same type of organization. He listed four guides for judging the desirability of learning experiences: (a) nature of the outcomes, (b) social demands, (c) learning and growth, and (d) the cultural heritage. He formulated four basic provisions which any organization of the curriculum should make.

Tyler (55) continued this discussion of major issues in design by contending that the primary consideration in determining the organization of the learning experiences themselves is to attain the maximum cumulative effect in achieving the objectives of the school. Leonard (31) and

Dale (12) defined sequence as applied to curriculum planning and illustrated sequence plans in various areas of learning. *School Executive* (50) presented a symposium on five methods of designing the curriculum. Arguments for and against each type were given.

In recent years few local or state systems have prepared guides for designing the curriculum. The 1930's were a period of intense activity in this aspect of educational development. One recalls the publications of such states as Alabama, Florida, Georgia, Mississippi, South Dakota, and Virginia, and of such cities as Denver, Fort Worth, Long Beach, Santa Barbara, Tulsa, and Winnetka; few similar guides to curriculum design have been prepared since World War II. This reviewer believes that there is no less experimentation or other effort to improve design today, but rather that school systems are working cooperatively on such problems with the entire staff involved. Theoretical considerations and action often proceed simultaneously, so that design is not crystallized thru formal publication of plans.

General Treatments of Design

Several significant statements on the design of the curriculum in general, as well as at the elementary and secondary levels, appeared during the period, altho some were revisions of earlier publications. Caswell (9) raised several issues about the development of the curriculum: (a) How shall the values that will guide the development of the curriculum be determined? (b) What should be the relationship between the curriculum and the problems and social conditions that exist in American life? (c) How shall the curriculum be planned in terms of both the role various individuals should play and the ways in which the various elements should be related? (d) What relative emphasis should be given to process and to end objectives? and (e) How can we train adequate leadership in a democratic tradition?

Cross (11) maintained that the six essentials of any curriculum are: (a) right and wrong, (b) language, (c) arithmetic, (d) the world we live in, (e) government, and (f) hand skills. The Thirty-First Yearbook of the American Association of School Administrators (3) reviewed the whole area of curriculum planning and summarized recent trends and developments. It listed various types of approaches that are being used to design the curriculum. Caswell (8) also reviewed recent trends in curriculum planning. He noted four new developments: (a) the core curriculum, (b) attention to individual differences, (c) concern for mental health, and (d) interest in intercultural and intergroup education.

Design of the Secondary-School Curriculum

The National Society for the Study of Education (40) performed a genuine service for curriculum workers in the preparation of a yearbook

on the adaptation of the secondary-school curriculum to the needs of youth. Altho not a research study as such, it brought together the insights gained from research as well as philosophical consideration of a number of prominent workers in the field. Alberty (1) discussed the general design of the high-school program, giving a penetrating analysis of the types of core program extant in the country; Gilchrist and Forbes (17) surveyed the kinds of program that have been developed for meeting the specialized needs of adolescents; Ivins (26) presented the need for work experiences and criteria for formulating sound programs; Strang (52) gave a thoughtful analysis of the role of guidance in meeting the needs of youth; and Trump (54) analyzed the place of extraclassroom activities in the total program of youth education.

In a revised edition of his earlier book, Leonard (30) added considerable new material on the whole problem of curriculum design at the secondary-school level. He illustrated trends in curriculum organization by citing plans developed in a number of school systems. Similarly, Alberty (2) revised an earlier book and in it broadened his treatment of matters of design. He presented a critical analysis of the core type of design and contrasted the subject and experience types of organization. A third book on design to be revised was the popular presentation by the Educational Policies Commission (39). The new edition retained all the basic aspects of the secondary-school program presented in the earlier edition, but made some clarification of concepts. This description of the kinds of secondary-school programs that should be developed in American secondary schools has been widely used by students of curriculum planning.

Briggs (4) summarized a lifetime of thinking about the curriculum of the secondary school. After a brief survey of the historical development of the curriculum, he analyzed current curriculum practices and then delineated the lines which he thought curriculum development should take in the years ahead. He pleaded for a clarification of objectives as a basis for curriculum designing. Procedures for cooperative development of curriculum design were described by Russell (48). The program for two new junior high schools was formulated only after an extensive analysis of the factors involved and a thoro consideration by the faculty of the entire situation.

As has been stated in a number of the treatments of general problems of design, one of the major problems facing secondary-school educators is the adaptation of the program to the varying abilities and needs of all students. Many educators, as well as lay citizens, feel that most schools are not making adequate provision for gifted pupils. The Fund for the Advancement of Education (16), subsidized by the Ford Foundation, reported on a number of studies designed to provide special opportunities for the intellectually gifted which it sponsored in secondary schools and colleges. Four major studies were in progress, and preliminary evaluation of one program has been made. One study was concerned with the overlapping, and resultant waste, between the last two years of secondary

school and the first two years of college. This study, involving three preparatory schools and three colleges, endeavored to provide better integration of the curriculum, reduce by one the years spent in college, and enable selected students to proceed more rapidly in their specialized fields of study. A second study attempted to identify gifted pupils of all types and to make special provisions for them in the secondary school. A third study brought together a group of secondary schools and colleges in a cooperative program to provide college-level courses in the secondary school and the subsequent admission of gifted students to college with advanced standing. The fourth study, and the one for which some evaluative results were available, provided for the early admission to college of selected gifted students, thus bypassing one or two years of secondary school. In general, 40 percent of the students included in the study to date had completed only the 10th grade in high school; 50 percent, the 11th grade; and the remainder, high school.

Havighurst and others (23) described a research project just recently initiated that is intended to make special provisions for two groups of adolescents, the gifted and the maladjusted, by utilizing the resources of a community to better serve these two groups. The study will extend over a period of 10 years, and results will be evaluated by means of a control group of pupils. The purpose is to challenge the gifted so that they will be able to make greater contributions to society and live more satisfying lives, and to work with the maladjusted so that they become good citizens. Meier, Cleary, and Davis (37) reported on a broad, extended study of citizenship education in the secondary schools. This study showed that: (a) concerted attempts to improve citizenship in the schools resulted in improved human relations, but no appreciable gain or loss in academic achievement; (b) the crucial factor in citizenship education is the identification by the faculty of the ends sought and the means by which they are to be attained; (c) improvement of citizenship education depends on the improvement of the values, insights, skills, and abilities of the staff; (d) ways of working are important; and (e) the individual school is the crucial unit in any organized attempt to improve the curriculum.

Cook (10) studied the academic achievement in university of the graduates of two high schools that differed considerably in curriculum organization. McHose (34) reported methods that may best be used to introduce family life education into the school curriculum. Studies of the curriculum offerings of high schools in Minnesota and California were reported by Prentis (47) and the California State Department of Education (7). The Illinois Secondary School Curriculum Program continued to publish excellent guides to analysis and study of the curriculum. As a part of the program, recent curriculum developments in 19 Illinois high schools were described by Sanford and others (49). The development of core programs and problem courses, including the use of more functional subject-matter, was carried out in a number of the schools. The Local Area Consensus Studies, developed by Hand (19) and a large number of special

committees for each aspect of the high-school program, encouraged a comprehensive analysis of the opinions and beliefs of teachers, parents, and citizens generally, as a basis for curriculum improvement. McFarland (33) used 18 criteria as a basis for surveying what Texas high schools were doing to develop life adjustment programs. He found that some schools have developed core programs and some have introduced problem-type courses in order to provide more functional programs. The various subject fields were also analyzed to ascertain what changes had been made in terms of the criteria of life adjustment education.

The community-school concept has important implications for curriculum design, especially at the secondary-school level. The National Society for the Study of Education (41) prepared a yearbook that defined this whole concept and presented examples of best practices in the development of community schools. Naslund (38) also explored the origin and meaning of the community-school concept, and presented basic criteria for identifying a community school and criteria to judge whether the school has implemented this concept.

The Core Curriculum

As is to be expected, analyses and discussions of the core curriculum movement are numerous. However, research studies as such, in which efforts are made to evaluate the core as a method of design, to ascertain outcomes that may best be attained thru the core organization, or to compare pupil achievement and outcomes in the core organization and in the subject organization, are almost totally lacking. The difficulty of carrying on such research on a definitive basis is apparent to curriculum workers and few have been disposed to attempt it in recent years. Most of the studies noted here are statements of principles or descriptions of practice.

Several books gave detailed consideration to the core type of organization, and described practice in numerous schools. Faunce and Bossing (15) gave a complete analysis of the core concept, but Alberty (1, 2), Leonard (30), and the Educational Policies Commission (39) all presented basic explorations of this newer approach to design. Butterweck (6) stated six characteristics of the ideal core organization. Noar (43) not only described the core program as it was organized in a junior high school, but also presented a detailed analysis of the various learning units actually studied by core classes over a period of eight years. She also illustrated the integration of the language arts into the core studies. Burnett and Burnett (5) described core programs in two school systems at the junior high-school level. MacConnell and others (32) issued a revised edition of their earlier analysis of the core program at Evanston Township High School. Seeley (51) showed how the core organization could be used to advantage with slow learners.

A study of the relative effectiveness of a core curriculum and a conventional curriculum in developing social concerns among secondary-

school pupils was made by Fair (14). On the basis of four hypotheses she set for the study, she concluded that 12th-grade pupils in core programs were as aware of social conditions as were pupils in conventional programs and that core pupils were more willing to take a democratic position toward social goals and policies than were pupils in the latter type of curriculum. She also concluded that core pupils were no more able to apply statements of fact and value generalizations to social problems than were pupils in conventional programs, nor did the evidence show that they were more interested in social conditions, events, goals, and action than the latter group.

Three studies of the status of core programs were reported. Krug, Liddle, and Schenk (28) found that 44 out of 463 Wisconsin schools that supplied data for the study used some type of multiple-period curriculum organization in one or more of the Grades VII thru XII. However, 23 of the schools had such classes only in Grades VII and/or VIII. Wright (59) followed up an earlier study on the status of core programs thruout the country by ascertaining the types of programs actually being used in the schools that reported such organizations. She identified four types of core programs, but only 42.8 percent of the 519 schools responding had a true core organization in one or more classes. The others reported a unified studies type of program in which the subjects retained their individual identity, but were correlated or fused in presentation. Harvill (21) traced the history and development of the core program in Alabama secondary schools. The development of the core program in Maryland was analyzed by Lawhead (29). He found that local school systems in general had not worked out as forward-looking a program as that recommended by the state department of education, and that the senior high schools had not kept pace with the junior high schools in organizing general education programs of an integrated type.

Descriptions of core programs are also helpful to curriculum workers and some recent publications add to our knowledge of this type of design. The University School of Ohio State University (44) published a description of its core program, as well as of the other parts of its offerings. Van Til (57) also described the core program at University School from the point of view of a teacher participating in the program. Considerable detail on the actual experiences provided in the core was given. Harap (20) described core-type programs being used thruout the country according to grade level. The core program of the Elizabeth, New Jersey, junior high schools was described in a pamphlet by Ovsiew and others (45). The guide to the development of the core program in New York City high schools (42) offered an analysis of the core type of organization. Hauber (22) and Goddard (18) added further insight on the development of this program. Douglass (13) reviewed the core movement, discussing the general types that have evolved. He then showed how the subject of business education could make an important contribution to the core program. Meeks and Johnston (36) stated that guidance is an essential aspect

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of a core program and outlined the role of the guidance specialist in working with core teachers.

Design at the Elementary-School Level

Few general studies of design at the elementary-school level were made during this period. Most of the research was done in specific areas of the curriculum, and it is not the purpose of this issue to review such studies. A yearbook of the John Dewey Society (27) treated many aspects of curriculum planning at the elementary-school level; the chapter by Streitz (53) is especially pertinent. She showed how subjectmatter may best be used on a functional basis. Pflieger and Weston (46) were concerned with the emotional adjustment of pupils and described school programs that contribute to the mental health of pupils. Numerous school programs, including some experimental practices in curriculum organization, were described in a publication of the U. S. Office of Education (56).

Wingo (58) and Hopkins (25) presented a theoretical basis for a design for the elementary-school curriculum based on the experience concept. Wingo stated that the activity program can provide for the use of reflective thought in meeting problem situations. Hopkins maintained that needs constitute the only valid basis on which to design a curriculum.

Need for Research

The paucity of definitive research on curriculum design is apparent from the above review. Altho any curriculum must always be designed on the basis of predetermined values and hence on philosophical considerations, research is needed to test judgment and to verify the soundness of any procedure. This area of design is one of the most difficult to subject to the usual research procedures, but certainly curriculum workers must set about to obtain better evidence on the validity of various types of organization than is now available. Much of the criticism being leveled at education today involves problems of design, and educators are unable to reassure the public on the merits of the educational program if research is not carried on simultaneously with the development of new approaches to organization. Does modern education neglect the fundamental skills and abilities to too great an extent? Are gifted children unchallenged? Does "progressive education" result in undisciplined, irresponsible young people? We need answers from research.

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CHAPTER III

Teaching Materials

WILLIAM H. BRISTOW and PAUL TREATMAN

TEACHING materials are courses of study, syllabuses, curriculum bulletins or guides, handbooks, research reports, curriculum newsletters, publishers' manuals, audio-visual aids, and other materials which serve a teacher education function. These materials are in contrast to pupil materials or learning materials which are designed for direct pupil use in the learning process.

Evaluation of Teaching Materials

The impetus toward the over-all evaluation of printed teaching materials produced by school systems originated with Herbert Bruner in the curriculum laboratory of Teachers College, Columbia University, during the 1920's. The successor to this effort is currently a project of the Association for Supervision and Curriculum Development, which periodically issues a list of outstanding teaching and learning materials (6). Materials included in this listing are selected on the basis of these criteria: Is the material cooperatively selected and developed by teachers, parents, pupils, and others directly concerned? Is the material built upon the experiences, needs, and interests of the learners of the particular ages? Does the material utilize many and varied resources for learning available in the community and appropriate to the material and the learners? Are the teaching and learning suggestions consistently based upon the soundest principles of learning, mental hygiene, and personality development? Does the material help learners to reorganize, refine, and evaluate their own learnings intelligently? The authors of the 1951 list reported that a study of the materials included revealed that: (a) there is much emphasis on explaining schools to parents, (b) there is a movement to decentralize production of materials, (c) fewer materials stress subjectmatter to be taught, (d) there is greater stress on suggested activities and approaches and less stress on prescriptive material.

Corbett and others (13) made a field study of teaching programs in current affairs and found that much is being done to acquaint teachers with the use of current materials such as newspapers, magazines, and audio-visual aids. It was also determined that teachers need courses of study which "inspire and motivate rather than restrict and dictate" and teaching guides and manuals which offer practical teaching suggestions and pupil activities.

Industry-sponsored teaching materials run into the tens of thousands. Netzer's study (42) reported widespread acceptance of such materials but not necessarily agreement with types and features of materials offered. The acceptance of many industry-sponsored materials by a large number

of teachers without study and evaluation as to their suitability for the level and unit being taught, as well as to their compatibility with educational philosophy, emphasizes the task of professional workers in teacher education according to Netzer. In addition, there is a need for cooperation between education and industry if industry-sponsored materials are to be used wisely and effectively in the classroom.

Much research on teaching materials is unreported because it is conducted by publishers or by business and industrial groups desiring to determine trends in connection with their own operations.

Evaluative progress reports were published by the Joint Council on Economic Education (32) and the Public Affairs Committee (45) of selected teaching materials which they produced. The Joint Council noted that its teacher publications are in the form of guides and monographs with general applicability, and guides produced for specific regions or localities. The Public Affairs Committee attributed the marked readership and use of its pamphlets to: (a) accuracy and readability, (b) careful selection of topics, (c) extensive provision for promotion, (d) sound pricing policies, and (e) close cooperation with consuming organizations. Educational programs involving the use and appraisal of teaching materials were conducted by other private organizations such as the Institute of Life Insurance (31) and General Mills (23) and others (33).

A process of evaluation or the use of criteria as a basis for selection was implied or expressed in a number of bibliographies of teaching materials (2, 3, 4, 5, 12, 21, 30, 51, 54), free and inexpensive materials (19, 24, 29, 35, 48), and audio-visual materials (8, 16, 22, 27, 37).

Altho audio-visual materials are widely used for teacher education, evaluation of their use was limited. Harcleroad and Allen (26) categorized audio-visual publications as follows: (a) lists of audio-visual education materials, resources, and services; (b) bulletins, including statements of policy, statements of audio-visual services available, announcements of events, proposals for consideration and action, and findings and conclusions of working committees; (c) handbooks and technical manuals; (d) study guides; and (e) curriculum resource units. A UNESCO survey (47) of educational television in the United States showed that in many instances the use of television for school-community relations preceded its use as a classroom tool. School television programs (a) fall into curriculum subjects, (b) need to be supplemented with teacher and pupil guides for use before and after programs, and (c) present the problem of the "tyranny of time" imposed by the inexorable demands of the stations' programming schedules. A report of a Nebraska experiment (39) in the use of motion pictures in classrooms showed that motion pictures can make contributions to the enrichment of learning and the modification of beliefs. This study may have implications for teacher education and curriculum development. Similarly, an analysis of film research published before June 1, 1950, conducted by Hoban and van Ormer (28), revealed that (a) significant learnings derived from films are chiefly facts, con-

cepts, motor skills, and attitudes—there is little evidence of the develop-
ment of appreciation and imagination; (b) effective and appropriate
films properly used achieve more learning in less time than reading or
talk; (c) instructional films are likely to stimulate other learning ac-
tivities such as discussions, reading, investigations, and art work; and
(d) in communicating facts or demonstrations, appropriate films are
equivalent to at least an average instructor. In addition, "ten principles
of film influence" were deduced.

The Citizenship Education Project (11) of Teachers College, Columbia
University, demonstrated that teachers who use the materials and resources
of the Project get results significantly better than results achieved by the
same teachers using more traditional methods. A study of the use of cur-
rent materials in English, science, and social studies classes by Kinney
and Dresden (36) indicated the effectiveness of such materials.

Museums provide learning experiences for teachers as well as for
pupils. Growing interest in the role of museums in teaching and in teacher
education was indicated by a report (49) of participants in UNESCO's
international seminar on the role of museums in education. How educa-
tional work with children has been conducted was described in the reports
of the Cleveland Museum of Art (40) and the International Council of
Museums (9). Baltimore published a bulletin on school-museum relation-
ships (7).

Preparation of Teaching Materials

Thru interviews and questionnaires, Cotton (15) studied the opinions
of teachers and leaders in curriculum with regard to factors essential
to producing, designing, and introducing effective written teaching ma-
terials. In this investigation consideration was given to items such as
teacher involvement in production, group dynamics, style of presentation,
usability, face-to-face associations in introducing materials, distribution,
and try-out. Teachers and leaders agreed that (a) materials should be
produced cooperatively by those concerned with the materials, (b) group
dynamics are a significant part of the production process, (c) materials
should be timed to meet needs, (d) the nature of content of the materials
should be such as to help the reader solve his problem, (e) the materials
should be physically attractive, (f) provision should be made for face-
to-face associations in the introduction process, (g) provision should be
made for follow-up on the use of materials, (h) materials should be geared
to the local situation, and (i) materials should be an integral part of the
inservice education program. Cotton found that teachers were concerned
with securing materials that were effective in solving classroom problems,
whereas curriculum leaders, who also sought such materials, placed
greater stress on the means to the end, that is, the *way* to produce effective
materials.

Doll, Passow, and Corey (17) compared the approaches used by three
kinds of school system curriculum organizations in producing written

teaching materials. In the "centralized" position, where the curriculum was directed traditionally from a central office, production of courses of study predominated. In the "decentralized" approach, which stressed local school curriculum development, materials which suggest bulletins, study guides, research reports, sample units, curriculum news releases, rather than those which prescribe, predominated. In the "centrally coordinated" position, which combined elements of the two other approaches, the trend was away from rigid syllabuses toward more flexible guides and outlines.

A compilation by Caswell and others (10) of reports on current curriculum programs described the many kinds of teaching materials produced in nine curriculum improvement programs in various parts of the country. The authors made no direct evaluation of the materials which they reviewed.

How curriculum and research are united in a process of producing teaching materials was described in an annual report (43) of the superintendent of schools of New York City. Corey's publication (14) on action research, while not referring specifically to the development of teaching materials, was suggestive in terms of curriculum improvement thru local school research.

A document (20) on the preparation, design, and publication of training manuals for industry, education, and the armed forces was prepared by the New York State Department of Education. This manual, in itself the product of conferences involving numerous resource persons and analyses of sample training manuals, was geared specifically to vocational education, and detailed a step-by-step procedure for the development of manuals. A guide for the construction and use of a resource unit was prepared by Aldrich (1).

While the importance of readability of teaching materials is generally recognized, no research along the lines used in studies of pupil materials (46, 52) was reported. A beginning was made in works like Gunning's (25), which considered the problem of readability and gave an exposition of 10 rules for clear writing. Tho not expressly stated, this work has implications for curriculum workers who write for teachers. Readability and readership are fertile fields for exploration. They are areas in which research can contribute much to the development of more effective teaching materials.

No major study of curriculum laboratory or library services appeared since Drag's effort (18) in 1947. Norberg (44) reported a recent trend in the nature of an increase in the number of schools which combined all instructional materials services into one integrated operation. Resources for teaching were studied by Williams (53) and the University of Connecticut (50). A beginning was made in the study of trends in school library services (38, 41). The movement in curriculum laboratory and library services has gone ahead, but studies are still needed to determine their extent, operation, and kinds of services.

Other Research Needs

Teaching materials are a handmaiden to programs of curriculum development and teacher education. The research on teaching materials is just beginning. Yet in view of the vast expenditure of money, time, and energy, it would seem urgent that many studies be undertaken to evaluate teaching materials in terms of their source, kinds and variety, preparation and design, extent and nature of use, readability and readership of those printed, ways of distribution and implementation, and processes in production. While great stress had been laid on participation in production and on the process of curriculum development as a whole, little is known about the relative merits of materials produced under different conditions. For example, works like Kelley's (34) on the workshop way of learning suggest certain conditions under which materials may be produced, but research is lacking on the nature, extent, and use of teaching materials so produced. In terms of source of teaching materials, a fertile area for research is the large quantity of teaching manuals and monographs produced by publishers.

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CHAPTER IV

Organization and Procedures for
Curriculum Improvement

A. HARRY PASSOW

THE major influence on organization and procedures for curriculum improvement probably has been the concept that educational progress involves changes in people—in their values, skills, understandings, and relationships. Programs, technics, and procedures have been guided generally by this view of the importance of involvement in the change processes. As a result, these emphases in programs and plans have emerged as some of the major trends in curriculum development: (a) widest possible participation in planning, testing, and evaluating by all persons—professional and lay—who are affected by policy and action decisions; (b) assignment of the individual school to a more central role in curriculum activity; (c) use of groups for initiating, planning, executing, and coordinating improvement efforts; (d) fusion of supervision, inservice education, and curriculum activity to concentrate personnel and processes for the improvement of instruction; (e) experimentation with procedures and devices for more effective involvement; (f) extension of kinds and uses of consultative services from many sources—central office, state department, universities and colleges, for example; (g) use of cooperative research in field situations for improving practices; (h) teamwork from many levels in cooperative enterprises; and (i) development of more effective and widespread leadership.

Organization for Curriculum Improvement

Educators organize for curriculum improvement primarily to obtain optimum use of human and material resources in achieving their individual and group goals. Much of the literature described proposed or existing programs and plans with less attention to reports of systematic testing of a particular kind of organization to determine its value in facilitating improvement. Mackenzie and Bebell (87) pointed out that the relationship between organization and process in curriculum improvement has been neither clearly defined nor carefully studied. Theorizing continues about important issues in organization such as these: What should be the basis for organization—building, system, or other unit? Should the organization be structured or emergent? What personnel should be considered in organizing and how does organization affect personnel resources?

An Association for Supervision and Curriculum Development Yearbook (13) focused directly on problems, principles, and practices of initiating change, organizing for improvement, developing leadership, and evaluating improvement programs. Caswell (28) suggested that the kind

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of curriculum desired should help determine the organization for bringing it about. He recommended attention to these factors: (a) the role of a central staff, (b) the place of the individual school, (c) the administrative services to be provided, (d) the kinds of committees, and (e) the provisions for lay participation. Hall (57) concluded that successful curriculum development was possible within any frame that considered the nature of improvement and the nature of the people involved. Doll, Passow, and Corey (48) contrasted three approaches to curriculum improvement—centralized, decentralized, and centrally coordinated—according to nine criteria.

Ahrens (2) presented a number of approaches to improvement and advocated the individual school as the primary unit. Alexander (5) analyzed the advantages of the building unit and proposed five characteristics of good organization. A major generalization of the Citizenship Education Study reported by Dimond (47) was that the individual school is the natural unit for revision in that it makes total faculty involvement possible. Mackenzie, Gilchrist, and Umstattd (90) proposed that organization be viewed as a continuous process rather than an established pattern or structure. Emphasizing the advantages of decentralization, they examined the relationships, functions, and responsibilities appropriate to building and central office personnel. Briggs (21) recommended a unified national effort consisting of a hierarchy of committees and a well-staffed curriculum research laboratory.

Plans and Programs for Curriculum Improvement

Numerous kinds of programs for initiating and carrying on curriculum improvement have been reported, not all of them well defined. Ahrens and others (3) found that schools with plans of action for continuous curriculum change are apparently in the minority. A comprehensive report which included many illustrations of various kinds of organization and activities in schools was published by the American Association of School Administrators (7). Descriptions of selected programs in individual schools, systems, counties, states, and regions were compiled by Anderson (10), Carroll (27), and Spears (127). All of these indicated growing cooperation among many different levels of organization.

Murphy (99) studied curriculum change in New York State and observed a trend toward increased local school participation using many different organizational patterns and technics. In identifying significant characteristics of programs in schools of the Michigan Secondary School-College Agreement, Johnson (75) analyzed such factors as participation, time provisions, organization, problem solution, evaluation of study program, use of resources, processes for defraying costs, and obstacles to improvement. Walker (137) investigated leadership responsibilities, committee organization, training for curriculum work, administrative provisions, coordination, resources provided, and inservice procedures of 10 California city systems. He noted considerable curriculum activity in in-

formal, unrecognized groups. DiLeonarde (46) examined the procedures used in initiating, organizing, implementing, and evaluating the effectiveness of programs in selected schools.

Hass (63) described and evaluated the plans, procedures, and organization of a county's systemwide curriculum program in which the individual school is the basic unit for improvement. Among the modifications he found were improved individual-building planning, alterations in teacher roles and changes in the programs and experiences for children. Curriculum planning in city school systems was reported by Battle (18); Della-Dora and others (44); Doll, Passow, and Corey (48); Herrick (66); Miller (93); and Pierce (113). All these reports and studies indicated reliance on some kind of committee or council to initiate, coordinate, and evaluate curriculum work and described various kinds of groups participating in making changes. Organization for improvement in a single school was studied by Moeller (95), Nannini (100), Pierce (114), Roe (116), Rounds (119), and Schaibly (124). Some of these reports consisted of descriptions only, while others appraised existing organizations and proposed revisions.

Committee organization of some kind is almost universal in all programs. Since people are regarded as primary resources for curriculum change, increased involvement has been sought thru various kinds of groups. These groups differ in structure, membership, purpose, and operational procedure. They may serve as initiating, coordinating, task-centered, study, or advisory bodies. Membership may consist of different combinations of teachers, supervisors, administrators, citizens, pupils, and state department and university personnel. Size and frequency of meetings vary considerably. Surveys of committee activity and organization were made by DiLeonarde (46), Johnson (75), Murphy (99), and Walker (137). Reports of committee structure and ways of working were prepared by Battle (18); Doll, Passow, and Corey (48); Hass (63); Miller (93); Moeller (95); and Pierce (115).

Resources for Curriculum Improvement

Stimulating, facilitating, and coordinating individual and group efforts increasingly concern the curriculum worker. Questions of function, organization, and leadership of personnel resources have become crucial ones. Mackenzie and Bebell (87) found group procedures part of almost every discussion and study of curriculum change and speculated whether this interest was limiting investigations in other directions.

Studies of leadership for curriculum development dealt with conceptions of the nature of leadership, analyses of the functions of curriculum leaders, and descriptions of the roles and responsibilities of status persons. Conceptions of leadership with implications for instructional improvement were proposed by Mackenzie and Corey (88) and Passow (107). The nature and improvement of instructional leadership were studied by Mackenzie and Corey (89) in terms of leadership functions

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in school situations, ways these functions may be exercised, and factors affecting leadership. Leavitt (85) analyzed the role of the leader in action research and suggested two needed areas of competency—handling human relations and working thru research designs. Alexander and Patterson (6) emphasized the belief that in a cooperative endeavor the functions of leadership belong to all concerned with the outcomes. They discussed and illustrated ways in which teacher, administrator, supervisor, pupil, and lay leadership can be and is being developed in curriculum improvement programs. All these studies indicate that the quality of administrative and supervisory leadership is an important factor in successful curriculum improvement.

The paramount function of the superintendent was described by the American Association of School Administrators (8) as that of exerting leadership by providing the facilities and conditions that make effective teaching and learning possible. Ways of developing effective leadership in small schools were illustrated in a report of the Association for Supervision and Curriculum Development (14). From a survey of individuals with "successful" programs under way, Sanford (121) identified nine jobs of the administrator in curriculum revision. Cherry (30), Joslin (77), and Peterson (111) examined the role of the principal in curriculum improvement and found principals more actively concerned with instructional leadership, particularly where the building unit had assumed greater autonomy in program revision. Davis (43) surveyed the kinds of instructional improvement activities in which principals engaged as well as the time devoted to these activities and suggested ways of increasing this time. Hass (63) examined the role of a curriculum director in an ongoing program. Teel (131) studied means by which the central office staff could help principals assume curriculum leadership.

The June 1951 issue of the REVIEW combined the topics of supervision and curriculum change, thus reflecting the emerging concept of the supervisor as primarily a leader in improving instruction. Moorer (97) described the chief purpose of supervisors as that of providing expert technical services to teachers and administrators in improving instruction. He reported the accomplishments of a statewide supervisory program and the services thru which these had been attained. The ways supervisors worked with teachers and administrators in a county system were presented by Downing (49).

There have been several approaches to improving instructional leadership. Wofford (143) gave accounts of county, state, and regional efforts to improve supervision in rural areas. Stoneman (128) suggested cooperation among several small units and teacher-education institutions as a means for providing better leadership for improving instruction in rural areas. Franseth (54) presented an appraisal of Georgia's program for preparing supervisors. Two inservice programs, one for Jeanes supervisors and the other for a county's administrative personnel, were described by Matthew (91) and Story and Tjomsland (129). Adkins and Proudfoot

(1) described five technics being used to evaluate and improve the West
Virginia supervisory program. Three Horace Mann-Lincoln Institute of
School Experimentation projects were reported: a cooperative project
undertaken with principals and coordinators to improve their own lead-
ership was reviewed by Corey (39) and Mackenzie and Corey (89); an
experiment in improving the cooperative research skills of status leader
teams was described by Passow and Draper (108); and a method for in-
creasing the competence of teachers as discussion group leaders was pre-
sented by Corey, Halverson, and Lowe (40).

Laymen are participating in a variety of ways in many phases of cur-
riculum improvement—helping to determine goals, sharing in setting
policies and plans for programs, and providing expertness for enriching
instruction. Hamlin (58, 59) reviewed the literature and concluded that
local citizen participation is growing rapidly and that principles for or-
ganizing and operating such groups are gaining general acceptance. Is-
sues of *Educational Leadership* (19) and *School Executive* (34) presented
reports and analyses of lay participation in planning and action. Johnson
(74) reported how a community included lay and professional resources
in planning. Further studies on lay participation are reviewed in Chapter
V of this issue.

The extensive use of consultants in working with groups has resulted
in studies of the kinds of functions they can perform and methods by
which their services can be used most effectively. Lawler (84) analyzed
the role of the consultant in curriculum improvement. Troyer (134) de-
veloped some principles for consultative work in education. Blaha (20),
Curtis (41), Little (86), and Savage and others (123) suggested ways of
improving the effectiveness of consultant services. The variety of consult-
ant services available thru a county superintendent's office was described
by Celse and others (29).

The role of state departments of education in improving instruction
continues to undergo modification and redefinition. Nelson (102) de-
scribed and evaluated the procedures and resources of three state depart-
ments in their efforts to assist local systems with particular problems.
He noted growth away from inspections for standardization purposes and
toward furnishing consultation on specific curriculum problems. Savage
and others (123) surveyed 12 state departments regarding their services
and reported a similar trend toward consultation. Hilton (69) analyzed
the consultant services offered by three state departments to administrators.
Albright (4) examined the purpose, structure, and functioning of the
Tennessee state department and observed a trend toward assisting local
schools in cooperative planning on problems of mutual concern. Sisson
(126) studied the role of the Virginia state department and concluded
that its major contribution had been in providing leadership and advisory
services responsive to state and local needs.

State education departments, cooperating with universities and colleges,
have been instrumental in initiating and carrying on statewide curriculum

improvement programs with public schools. Such statewide programs were reported by Carpenter (26), Dieckman (45), Fishback and Mees (52), Ladd (81), Oliver (104), and the Wisconsin state department (142). One of the most comprehensive state programs is that of Illinois which was described by Henderson (65) and Sanford and Spalding (122). The Illinois Curriculum Program is a cooperative effort involving public schools, the state department, all state-supported colleges and universities, and professional and lay associations representing all major groups in the state.

Universities and colleges are developing many ways of working directly with schools in curriculum improvement. Shriner (125) investigated the programs and services which 22 institutions offered schools to assist them in curriculum development. He concluded that institutions are making many more resources available and that schools in increasing numbers were using these services. Jordan and Goodlad (76) prepared a progress report on the Atlanta Area Teacher Education Service which described how several institutions are combining their resources with those of public schools to help solve problems confronting teachers and administrators. Foshay (53) reviewed the activities of a bureau of educational research and indicated trends in areas and methods of operation of that organization.

Thru personnel and material support, institutions of higher education continue to play central roles in the growing number of school study councils. *New York State Education* (103) published reports on the formation, operations, and accomplishments of several councils. Felix (51) reported the involvement of a large number of individuals in a statewide council research project. Woollatt (146) analyzed the problem-solving process of a study council committee. Griffiths and Leese (56) concluded from a survey of teachers who had participated in council activities that considerable change in both practice and attitude had resulted from such participation.

A review of the influence of commissions, committees, and professional groups on the development of elementary education was prepared by Harding (62). He suggested that of all the influences of professional associations one of the most important has been the improvement of classroom instructional procedures. Anderson (9) proposed criteria for evaluating the effectiveness of professional groups in promoting inservice growth and suggested ways of increasing this aid. A progress report by Everett (50) described how the Association for Supervision and Curriculum Development was helping to extend cooperative curriculum research activity thru assisting local, state, and regional groups to initiate and execute projects.

Several studies have indicated ways special groups have participated in curriculum development, primarily thru the provision of personnel and financial support. Teachers, school systems, universities, state departments, and philanthropic groups have cooperated in inservice projects in such

areas as intergroup education, economic education, and community study. Patterson (109) described the growth of intergroup workshops during the past 10 years. Detailed studies of particular intergroup projects were made by Taba (130) and Trager and Yarrow (132). Bard (17) made an analysis of Baltimore's community study program. Kearney (78) reported the recommended elementary-school objectives of two teams of experts; these were intended to stimulate further research. The organization, operation, and progress of a nationwide service project to improve citizenship education were reviewed by the Citizenship Education Project (31).

Procedures for Curriculum Improvement

Altho there has been considerable interest in the processes of curriculum change, there seem to be fewer studies than might be expected which provide data to substantiate procedures employed in particular programs. Romine (118) suggested four ways the teacher could improve instruction, on his own if necessary. Bruner (23) illustrated the way a teacher attracted the cooperation of students, colleagues, and community groups in program improvement. Clapp (32) and Morris (98) prepared detailed accounts of the procedures by which three rural school faculties bettered both school and community. Descriptions of ways teachers can work together to advance their schools were compiled by Cooper (36).

Wood (145) observed that curriculum improvement as a process has become synonymous with supervision and inservice education, for many current technics have grown out of good supervisory practice and inservice training. Ahrens and others (3) included among the promising means for professional growth: study groups, educational workshops, inservice courses, committee service, conference attendance, clinics, demonstrations, school visitations, consultant services, and action research. Williams (141) analyzed curriculum revision in a particular system and found that four major processes had been employed: classroom research, staff research, systemwide study, and cooperative lay-professional study. Johnson (75), Murphy (99), and Walker (137) surveyed procedures used in curriculum revision. Lawhead (83) evaluated curriculum development in selected Maryland counties.

Workshops of various kinds appear to be used extensively in curriculum and inservice work. Kelley (79) reported that the workshop method at Wayne University had created changes in the participants that made them not only better persons but more effective teachers. Anderson (11) analyzed what it is that makes a good workshop. Anderson, Baldwin, and Beauchamp (12) prepared a workshop handbook. Taba (130) analyzed data on the workshop method which indicated that it was a fairly potent learning experience from which individuals derived incentive for further work. Hardiman (61) edited an account of an intergroup education workshop's procedures and learnings. Coffey and Tiffany (35) reported a follow-up of a summer workshop. Hass (63) studied a county's workshops which involved the teaching staff in planning, orienting visiting

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consultants, training leadership teams, and preparing participants for group member roles. Many other workshops were described in the literature.

Hand (60) reported that the Illinois Curriculum Program's local basic studies were leading to curriculum change. Herrick and Knight (68) suggested re-examination of child study programs to determine the extent of attention to curriculum improvement in such activities. They proposed a fourth year which would focus on applying the understandings and abilities gained from child study to program improvement. Cushman and Green (42) described the procedures used in a systemwide attack on a reading problem. Larson (82) reported a faculty study of pupil evaluation. Studies of curriculum improvements which resulted from using the *Evaluative Criteria* of the Cooperative Study for Secondary School Standards were made by Baker and Etzel (16), Cope (37), and Unruh (135). Pierce (112) reported the initiation and evaluation of a program of preschool guidance for parents and teachers. Perrelli (110) investigated the use of modified sociometric technics in selecting a coordinating committee. The many uses of a curriculum center were described by Jennings (73).

Action research has been advocated by many writers as a means to curriculum improvement. Wann (138) reviewed the literature and commented that since action research methodology is only beginning to emerge, additional experimentation is needed to equip teachers to carry on quality research and speed the processes of curriculum improvement. Corey (38) presented a conceptional analysis of action research as a basis for sounder curriculum decisions by practitioners. Clark (33) described the values she had gained from engaging in classroom research. Hunnicutt (71) advocated the use of teams for research on important but complex educational problems. Parr (106) found that in California systems research departments and their functions had been taken into other departments such as curriculum and guidance.

Inservice Education and Curriculum Improvement

Generally, inservice education is viewed as part of total curriculum planning. A survey by the U. S. Office of Education (136) found that inservice education for all school personnel continued to assume increasing prominence in schools thruout the country. Rogers (117) concluded that the "bright spots" in curriculum improvement over the country are found in systems that have based comprehensive plans for inservice growth on cooperative planning for program improvement. Burk (24) and Mensky (92) studied inservice programs in selected schools in Indiana and Pennsylvania. Accounts of successful programs in communities of various sizes were reported by Moffitt (96), Ruff (120), Wilburn and Wingo (140), and the Wisconsin State Department of Public Instruction (142).

Specific programs and procedures for inservice education were reported by the Educational Policies Commission (101), Gorman and O'Brien (55), Heischman (64), Mills (94), and Waterhouse (139). Among the procedures used were workshops, conferences, committee work, discussion

groups, and study councils. Broadhead (22) described a supervised train-ing program for providing teachers with experiences in teaching disabled readers. Trevaskis (133) reported a year-long inservice program which culminated in a one-week workshop for an entire faculty on a college campus. Holmlund (70) concluded that Flint's inservice program had changed teachers and their students. Wood (144) sampled one-third of the teachers and administrators in Oregon to study the major activities and technics of inservice education. He found that teachers were spending considerable time in inservice activity but that these activities could be made more worthwhile.

Different means are used to handle problems of providing time and funds for curriculum work. A survey by the Association for Supervision and Curriculum Development (15) showed an acceptance of the desir-ability of releasing teachers from regular assignments for curriculum work but a reluctance to practice this because of costs involved or administra-tive difficulties. Many schools, however, are finding ways of releasing teach-ers. Klohr (80) described a midyear study plan. Carey (25) and Jacobson (72) stressed the importance of teachers having adequate time to develop meaningful programs and suggested ways of securing such time.

Evaluation and Needed Research in Curriculum Improvement

The ultimate criterion for judging curriculum organizations and pro-cedures is: Do these make a significant difference in the learning exper-iences of boys and girls? Because this criterion is a difficult one, cur-riculum workers have frequently settled for less significant but more easily tested criteria—or none at all. A paucity of technics and methods for attaining reliable data may explain why much of the literature outlines programs and processes with relatively little supporting evidence. The need for developing adequate evaluative technics has been further under-scored as the amount of local school experimentation increased. A basic assumption has been that changing the behavior of teachers as persons would ultimately be reflected in changes in the classroom. While there is a sound theoretical base and some data to support such an assumption, re-search should seek to pinpoint what specific aspects of organization and which particular procedures actually contribute to change learning ex-periences for the better.

Herrick (67) analyzed some of the important conditions for evaluating curriculum programs and indicated gaps in systematic evaluation. Parker and others (105) proposed some useful principles of evaluation and il-lustrated specific efforts to apply them. They pointed out that, altho sta-tistical technics are useful, these are frequently inadequate to record and analyze the kinds of data needed to measure curriculum organization and procedures for change. Curriculum workers were advised to borrow some of the methods of researchers in the social and behavioral sciences to get better evidence in this area of change.

Research might profitably test the theory that the individual school build-
ing is the best unit of organization for curriculum improvement. Other
investigations might provide better answers than are now available to
such questions as these: What way of organizing in a particular situation
will lead to most effective changes? What are the salient situational fac-
tors which must be considered in any organization for curriculum improve-
ment? How can the activities of a number of small groups be coordinated
to result in maximum growth in a school system? How can the experiences
and decisions of a small group be communicated and translated into ac-
tion by a larger group? How can communication among individuals and
groups be improved? How can committees best be initiated, constituted,
and coordinated? What means can schools use to extend the quantity and
quality of leadership available on all levels? How can blocks to change
be identified and removed systematically? When should inservice educa-
tion be voluntary or compulsory? What specific technics and devices can
be developed to increase the effectiveness of supervision for instructional
improvement? What is the relationship between good group procedures
in a curriculum work committee and changed practice in the classroom?
Practitioners need to find creative ways to help groups approach problems
of curriculum development more scientifically. Perhaps the major task
is to refine the tools and technics for systematically examining the organi-
zation and procedures employed in improving the learning experiences of
boys and girls.

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CHAPTER V

Participation in Curriculum Development

PAUL M. HALVERSON *

During the past two decades increasing prominence has been given to participation by teachers and laymen in curriculum development. The literature in this field has been, and continues to be, extensive. Much of the writing thru 1945 consisted of descriptions of local practices in teacher and lay participation, or statements of theory which justified widespread participation from the standpoint of a democratic philosophy.

In the past decade more attention has been given in the literature to the specific outcomes of participation. However, the increase in the body of theory is substantial. Benne (10) suggested that the values of cooperative planning in education reside in its being a method of democratic management and control in a context of changing functions and responsibilities; that cooperative planning is a basic aid to instruction with increased valid learning outcomes; and that it provides a new subjectmatter and skill sorely needed in our society. Benne and Muntyan (11) presented a discussion of curriculum change in the framework of human relations. Sharp (49) proposed that curriculum development programs in which teachers play the central role can become the best method for their re-education.

Adams and Dickey (1); Bartky (8); Boardman, Douglass, and Bent (13); Briggs and Justman (14); and Spears (52, 53) were the authors of recent books on supervision which gave considerable attention to group methods and participation in curriculum development as a basic supervisory theory, supplemented by many technics for securing involvement.

Van Til (56) stated that the idea of all people affected by curriculum change participating in the planning is a difficult concept to implement. The chief problems are the release of creative energy, clear communication, the use of the scientific method, and the participants' feelings of security. Trillingham (55) reported his findings from questionnaires sent to a number of California school systems. He found that successful practice from the field indicates that good morale is built upon many day-to-day relationships and procedures which combine to provide leadership, production, and understanding. Practices included the provision of good communication, participation in policy making, and the sharing of responsibility for implementation.

The relationship of participation to administrative policies was pointed out by Cherry (15) and Rogers (46). They proposed guide lines for administrators in initiating, maintaining, and evaluating programs of educa-

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*Louis Hill, graduate assistant in the School of Education, Syracuse University, assisted the author in the preparation of the bibliography found at the end of this chapter.

tional planning. They stressed the necessity of cooperative endeavors involving pupils, parents, teachers, administrators, and consultants. Ahrens (2) described a step-wise procedure for involving all concerned with curriculum improvement in a secondary school. Herrick (32) stated that one question to be asked in evaluating any program of curriculum improvement is: To what extent is the entire staff becoming involved and participating in the curriculum program? An extension of the same question is: To what extent are the administrative personnel becoming involved as working members in the major activities of the curriculum program?

Hamilton (30) challenged the concept of widespread planning of the curriculum by teachers, parents, pupils, and others, and argued that the basic need in curriculum revision is a core of curriculum experts, curriculum engineers, or technologists.

Skills in Cooperative Planning and Action

Gold (27) summarized the research findings in group dynamics which may be of benefit to school staffs in curriculum planning and those classroom groups engaged in cooperative learning activities. Lippitt and Zander (38) developed and reported a five-point scale on 15 aspects of group participation for which members can assume responsibility. The instrument is intended to stimulate and evaluate participation in problem-solving groups.

Smith (50) investigated the problem of making teacher-planning meetings more effective. She found that the group under study assumed more responsibility for the meetings when the status leader limited his own participation and helped the group to become more sensitive to better ways of working; that quality of responsibility as well as quantity increased as participation in meetings became more widespread; and that proposals for action and the assumption of responsibility for interim work also increased. Corey, Halverson, and Lowe (21) described a training program of one day involving the use of a tape recording of group discussion problems and of role-playing. The purpose of the training program was to prepare teachers for discussion group leadership in a curriculum development program.

Halverson (29) reported his findings on the productivity of a curriculum coordinating committee as related to certain criteria of group maturity. He found that productivity is related more closely to the ability of a group to satisfy immediate goals than to its concern with long-range objectives; that fact finding and evidence gathering correlated with the productivity of meetings; that the amount of verbal participation related to the productivity of the group but no positive correlations could be established between productivity and various kinds of participation; that an inverse relationship existed between productivity and the attention of the group to its own processes; and that productivity and sensitivity to individual needs and feelings were related.

There is evidence in the literature of a need for more definitive research in the skills of group processes in educational planning. As will be noted in a later section of this chapter, much of the reporting of cooperative curriculum activity is done in terms of the outcomes of such efforts with less attention of a research orientation paid to the processes involved.

Curriculum Development as Cooperative Research

Mackenzie and Bebell (41) in 1951 reported that cooperative action research has become a major development in curriculum study. During the past three years this interest and emphasis has continued. However, the literature contains more elaborations of action research theory than specific reports of such activity in which teachers engaged.

Corey (19) outlined his conception of the theory and practice of action research, including emphasis at a number of points on the desirability of cooperative research activity, and involving the participation of all persons interested in improving their own practices. Hunnicutt (33) stated that education, like industry, is beginning to realize that the solution of the important problems of our day requires the use of teams. He cited the interdisciplinary approach to educational problems; the collaboration of "rival" universities on the improvement of training programs in educational administration; and the research activities of the Association for Supervision and Curriculum Development, cutting across state and regional lines to include school systems, colleges and universities, and other agencies.

Reid (45) maintained that the voices of teachers should be heard increasingly thru the reports of their findings from classroom research on the curriculum and on teaching methods. Foshay and Goodson (26) stated that cooperative action research can be expected to produce principles of action—middle-ground principles—as its major outcomes. Its emphasis is on reality testing, on making values explicit, and on breaking down cultural stereotypes. As such, the principles will be action statements, standing between fundamental theory and real situations. Everett (23) outlined the opportunities and responsibilities of school people for engaging in research activities, and the possibilities for school systems to collaborate with universities, school study councils, social agencies, and other groups in cooperative curriculum research. Corey (20) discussed the relationship between practical decisions made every day by school people and the more careful methodology of research. By the use of an example of one school group conducting a casual inquiry into a curriculum problem and of another group taking a more scientific approach to a similar problem, he pointed out the difference in the degree of precision employed by the two groups and in the degree of confidence in their findings which the two groups might have. He suggested a concept of a research continuum rather than an absolute definition of research.

Passow and Draper (44) described the training activities of a small group of curriculum workers engaged in improving their professional

skills, attitudes, and understandings. Training activities included developing and practicing technics for the identification of curriculum problems; developing and adapting instruments for measuring the effectiveness of curriculum practices; practicing the interpretation of data; raising the efficiency of group work by role playing and other methods which stress human relation skills; fostering attitudes which welcome a ceaseless influx of more and better data; and identifying ways of locating and utilizing materials and resources.

Farley and Overton (24) reported a study in which they found that actions taken to improve the ability of boys and girls to engage in discussion will result in a more penetrating understanding of the problems being discussed. Banks and others (6) tested the relationships between students' intelligence, the information possessed by them about famous Americans before and after one semester of American History, their admiration of these historic personages, and the students' character reputations. They found that the only substantial positive relationships existed between intelligence and character reputations, and between intelligence and the amount of information possessed about historic personages.

Wann (57) asked certain teachers of Springfield, Missouri, how they felt about their involvement in action research. They stated that this process of study was practical for busy teachers, was different from other ways of studying professional problems and produced many satisfactions for them. Difficulties mentioned were: (a) achieving cooperation, (b) learning research technics, (c) need for frequent consultant help, and (d) sharing problems in their ways of working. Clark (16) reported her research on the writing habits of sixth-grade students. She stated that her personal gains were as follows: the development of system and thoroness in the collection and analysis of data; a sense of vitality in teaching activity; and new insights into effective teaching procedures.

Trends in Cooperative Curriculum Development

An attempt has been made in this section to identify the varieties of participations and varied outcomes reported in the literature during the past three years. Some of the reports represent carefully designed research studies of patterns and results of participation, others suggest areas of needed research of a more systematic kind.

Rounds (48) described the evaluation activities of a high-school group based on the "Ten Imperative Needs of Youth" and their relationship to the curriculum of the school. The evaluation resulted in basic revision of science and consumer education, and the introduction of family living and critical thinking materials into other areas. Miller (42) reported the cooperative activity of a group of elementary-school teachers in producing a course of study. He stated that the course of study was of great help, but that what happened to the thinking and attitudes of staff members who helped in its development was the greatest contribution to their school in recent years. Larson (37) listed the steps taken by a junior high-school

faculty in a cooperative research study of its problems in evaluating student progress, and discussed the concomitant values of understanding and insight into the potentials of group energy and leadership. Gorman and O'Brien (28) described the exploitation of resources within a local school system thru a local workshop in elementary science, the chief outcomes of which included growth of the participants in knowledge, increased volunteering for service, and cordial acceptance of leadership by fellow teachers. Dimond (22) evaluated the involvement of teachers in the Detroit Citizenship Study which emphasized total school participation in developing citizenship skills and attitudes. He stressed the importance of leadership sharing by administration, teachers, and consultants; the importance of intercommunication among groups; and the improvement of faculty meetings.

Jordan and Goodlad (35) reported the outcomes of the Atlanta Area Teacher Education Service during its first five years. They stressed the importance of the cooperative use of resources, human and otherwise, which resulted in a steady growth of participation in study groups and in research activity. Ross (47) assessed the cooperative planning and research activities of member schools in the Metropolitan School Study Council with particular emphasis on the outcomes in terms of improved practices in secondary education. Besnevick (12) reported the results of teacher participation in planning a basic education program on a countywide basis, the teacher-teacher and teacher-principal relationships involved, the methods teachers and pupils utilized in working and planning cooperatively, and the implementation and significance of teacher-parent planning.

Kelley (36) described in detail the process employed in workshops over a period of 10 years at Wayne University. The outcomes of participation in workshops were listed as follows: changes in attitudes; changes in teaching methods; sense of personal growth; improvement of human relations; formation of friendships; reduction of prejudices and the development of appreciation for and understanding of democracy; and the development of new skills in using resources, staff, books, and writings. Coffey and Tiffany (17) followed up the outcomes of a teacher workshop eight months after its members had made certain commitments relative to their teaching attitudes and behavior. The evidence gathered indicated that as a result of the workshop teachers had accepted a new view of themselves as important agents in social change. Lonsdale's (40) study of inservice education concerned itself with the problem of stimulating change in teachers, and of building in them an acceptance of change. Specifically he studied shifts in attitudes on a continuum of liberalism-conservatism with respect to 110 statements of educational issues. He found that off-campus courses and workshops were a positive factor in producing shifts in attitudes of teachers in the direction of liberalism.

Wood (58) found in his study that one-half of the teachers in Oregon who were questioned felt the need for continuous inservice education, that two-thirds believed inservice education should be required by boards of

education, that four-fifths of the teachers felt it should be recognized on salary schedules, and that almost three-fourths of the teachers believed that their participation had paid dividends in improved teaching.

Anderson (3) reported recent trends in cooperative curriculum development in the New England region that showed increased teamwork among public schools, state departments of education, universities and colleges, communities and other organizations, and states. Numerous examples of curriculum guides, bulletins, resource units, and courses of study were listed as the product of widespread participation among these groups.

Banning (7) made a study of 65 junior high-school teachers in a New England community which revealed that the degree of teacher-favorableness toward curriculum change is definitely affected by three relationships: teacher-administration, teacher-pupil, and teacher-community. Favorableness of attitude toward change correlated significantly with the teacher's feeling that he was a real participant in the formulation of curriculum policy and that his individual contribution consisted not only of assisting in policy making but also in implementing policy decisions. The 1951 Yearbook of the Association for Supervision and Curriculum Development (5) was a compilation of statements of theory and of examples of action programs in curriculum improvement. Emphasis thruout the book was on the people and the changes effected in them and their curriculums as a result of participation at the initiating, implementing, and evaluating stages.

Arnold (4) questioned 560 teachers and principals in Ohio on their evaluation of their faculty meetings, of their intercommunication, and of their mood or morale. The most significant findings were the high correlation between intercommunication and morale and the low correlation between intercommunication and faculty meetings. He suggested that altho intercommunication and faculty meetings deal with somewhat different things, there is a need for improvement in the use of small discussion groups, in the frequent interchange of views, in clarification of general policies, and in developing concern for the school program as a whole.

Coffman (18) studied nine factors of teacher morale: general liking for teaching, view of the profession, adjustment to teaching routine, satisfaction with financial security, satisfaction with the curriculum, relations with the principal, relations with fellow teachers, satisfaction with degree of recognition and participation, and liking for children. He found that the components of morale which involve human relations are relatively more important than others in relation to the success of curriculum improvement programs, and that the principal of a school is the key person in the development of good human relations. However, he suggested that persons who wish to develop the high morale required for successful curriculum improvement cannot ignore any of these components just because in general the human relations factors appear to be most important in most situations.

Beauchamp (9) conducted and reported an intensive research on the effects of an inservice education program in group methods of teaching.

Changes measured were in terms of children's social acceptance, attitudes of the children toward the teachers, attitudes of the children toward the school, and teachers' attitudes toward teaching. She found that, after the inservice program was completed, the children's acceptance of each other was greater; their attitudes toward the school had not become more favorable; their attitude changes toward teachers were not statistically significant, but tended to be more favorable in 10 of 15 classes; and teachers' attitudes toward teaching were slightly more favorable, but the differences were not statistically significant. The study concluded with some recommendations for teacher education, and for needed research.

Lay Participation in Curriculum Development

It is in this area of participation that the smallest body of research is found. Many statements of theory are available and countless examples of practices appear in the literature. This facet of participation in educational planning gives greatest promise for future research in curriculum development programs.

Storen (54) reported eight generalizations on the contributions of laymen to curriculum planning, based on the experiences of school people in Kalamazoo, Michigan; Glencoe, Illinois; and Eugene, Oregon. Ostrander (43) enunciated 12 principles of action for lay participation based on the experience of school people in working with the community of Oak Ridge, Tennessee. Johnson (34) described and evaluated the activities of lay groups in Ferndale, Michigan, in attempting to solve cooperatively their educational problems. This study used a more systematic research methodology than is usually employed. Hand (31) reported the development by the Illinois Secondary School Study of three instruments which may be used with community groups in securing their collaboration.

Felix (25) evaluated the involvement of teachers, administrators, and laymen in the Central School Study of New York State. This study resulted in improved curriculum practices, better communication between school and community, and the development of concepts of good education by lay people. Lloyd (39) reported the research technics used cooperatively by parents and teachers in an attempt to arrive at the factors needed before they embarked on curriculum revision. The results of such participation were not only new knowledge but also new insights developed about parent-teacher relations, the role of the school in the community, and the relationship of standards held for young people by their parents and by teachers. Smith (51) found that a substantial relationship existed between participation in, and satisfaction with, parent discussion groups; that 45-minute periods of discussion were too short; and that a period of an hour and a half was not too long when participation was widespread.

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CHAPTER VI

Technics of Curriculum Research

ARTHUR W. FOSHAY and JOHN H. GREEN

CURRICULUM research technics in the recent literature reflect the variety of viewpoints which characterize the field of education generally at the mid-century. Because educators are finding that they must learn to live with public education as a social institution of great complexity, the literature shows more concern with speculation regarding what research should be about rather than with how it should be done. Similarly, most of the textbooks on the curriculum do not discuss curriculum research under a separate heading, but intertwine it with the curriculum viewpoint developed. Despite this often confusing interrelationship, useful reviews of research technics appeared in the REVIEW in the issue on "Methods of Research and Appraisal in Education" (5). The chapter by Wann, "Action Research in Schools" (47) offered a recent bibliography of this rapidly expanding subject.

The October 1953 issue of *Phi Delta Kappan* was devoted entirely to educational research. Johnson (32) surveyed promising methods of statistical treatment of educational data, with special attention to problems of sampling and the simultaneous handling of many variables. In the same issue Cornell (10) discussed technics of research that he regarded as productive. The study by Cornell, Lindvall, and Saupe (11) suggested a method of measuring what students do in school and what teachers do in school according to a carefully devised observational schedule; it is a good example of attempts to render concrete the qualities that make classrooms differ.

Several major compilations of value to the curriculum worker were published recently: *Educational Measurement* (34), edited for the American Council on Education by Lindquist; *Research Methods in the Behavioral Sciences* (18); and *Research Methods in Social Relations* (28). All three dealt primarily with nonstatistical approaches to studying the data of the social sciences and contained extensive bibliographies. The methods of historical analysis, notably, were missing from them.

The remainder of the literature, and by far the greater portion, is speculative and general. It is reviewed here under two headings: the needs of, and the suggestions for, curriculum research.

Needs of Curriculum Research

The needs of curriculum research were considered by several authors. Hilgard (27) considered the two basic needs to be: knowing what we are trying to do, and knowing how we are to achieve it within the limits placed upon us by the community. The latter limitation, he maintained,

makes curriculum research applied research. Parker (39) posed the needs by asking: What is the spirit of our culture, and how can we translate it into behavior? He then presented two lists of questions on the nature of curriculum and on the operational problems of curriculum improvement.

Another formulation of basic needs was made by Taba (46) when she took to task the curriculum proposals that stem from developmental studies (26, 43), the cultural transmission proposal (17), the pupils' need proposal (13), the social needs proposal (1), and the community resources proposal (24). Taba suggested the following categories of basic needs in the curriculum: (a) diagnosing interpersonal relations; (b) studying socioeconomic and cultural backgrounds; (c) determining attitudes, feelings, and meanings; and (d) intercommunication between research technicians and teachers.

A need for the clarification of theories and terms has often been expressed. Gordon (23) stated that curriculum research should move toward the physical sciences in its methods, using narrowly defined hypotheses and gathering statistical information from all schools in the country. Moore and Stendler (36) saw the need for work on neglected ideas and the need for improvement in research technics. They criticized inadequate controls over variables, faulty design, and deceptive interpretations. Flanagan (19) called for well-defined terms to be used in instruments for observational measurement.

Kandel (33) proposed philosophical, historical, sociological, and comparative approaches to curriculum problems. Cremin (12) maintained that the historical approach contributed needed perspective; and Perdew (40), that it would clarify objectives. Dunkel (15) saw the need for a stronger philosophical base in curriculum research. He said that philosophic considerations are implicit in all curriculum formulations and insisted that the curriculum must not become disconnected from the significant. Underscoring this, Johnson (29) pointed out that mere description cannot suggest standards, but only norms; no summary of average practice can determine what practice *should* be. Dunkel also maintained that the main objective of curriculum research is to decide what the school wants to make happen. If other disciplines, such as philosophy, are called upon, curriculum research will gain stature and respect.

Mosier (37) also approached the curriculum from the philosophic viewpoint, but in a somewhat different manner. He said that the logical analysis of subjectmatter could yield the principles on which educational technic may be built. According to him, such analysis gives a complete map over which the student must travel to learn the subjectmatter, the key to the nine specific processes by which subjectmatter may be learned, and a series of mathematical equations that represent the logical skeleton of its propositions. Miel (35) presented the psychological notion that continuity is realized only at the center of a child's meaningful existence, and from this derived a caution against confusing sequence with continuity. In another publication, Mosier (38) stated that logic, perhaps better than

psychology, can act as a reminder to the curriculum research worker that learning begins with classes and categories of things, "not with facts but with concepts and relations, not with facts but with the symbolized experience of others."

Another need of curriculum research is to break out of the mold in which it has become set. This was the opinion of several critics. Curriculum research has too long been identified with the large university, the big name, or the struggling doctor's degree candidate (16). Such research has stemmed from some individuals' curiosity instead of from the crying needs of the schools (30). The pattern has tended to make research unrelated, piecemeal, specialized, and too statistical (33). Stoddard (45) put it more acidly when he said that curriculum research needs to be freed from the prosaic and repetitive rut, the fragmentary and discontinuous pattern, the continual avoidance of basic issues, the slinking away from the controversial, and the present separation from the superstructure of human values. Corey (9) added that curriculum research needs more tolerance for new technics. The idea that there is only one style of research must be replaced with the idea that inquiry is on a continuum ranging from impressionistic, untested ideas to systematically controlled investigation.

The perennial need of curriculum research to lessen the waste of effort was mentioned. Alberty (3) stated that a waste occurs because of failure to implement research. Wann (48) regarded the bridging of the gap between research and practice as the most important problem of curriculum research. Teachers and administrators may reject research and research findings for many reasons. Reid (42) stated that there is a genuine resistance on the part of some teachers because they feel insecure or inadequate in the face of research, which at times runs counter to their deeply rooted beliefs. This was borne out by the experience of Foshay and Hall (21) who found that the willingness of teachers to do research was an indication of the climate of the school, and that the hypotheses formulated reflected the beliefs and values upon which the school operated. Like teachers, administrators also have their fears and they, too, resist curriculum research. Johnson (31) maintained that they tend to hold to the status quo and to rely on "bull sessions" with fellow administrators in preference to reading dry research reports.

Suggestions for Curriculum Research

The method of meeting such needs as these that is most frequently suggested is action research. The background of action research is found in the work of Lewin and his associates, and in Collier's application of this method in the Indian Service between 1933 and 1945. The concept was refined and developed more recently by the Horace Mann-Lincoln Institute of School Experimentation group, especially Corey (8).

Alexander (4) saw action research as useful because it functions in a total situation and is in harmony with his belief that education is an

applied science. Reid (42) stated that curriculum research is more than asking teachers to supply data, more than a research worker gathering data that may in the end threaten the very teachers who cooperated, and more than a research worker sitting down with teachers to discuss their problems. Instead it is a research worker plus teachers, administrators, and community personnel working in a group to identify a problem, set up a method for inquiry, gather pertinent data, experiment upon the findings, and then evaluate the results.

The inclusiveness of action research and its lack of claim to virtue as an absolute were the chief advantages described by Corey (9). Foshay and Goodson (20) noted that action research has worth because of its basic ideas: testing by reality, making values explicit, breaking thru some cultural stereotypes, and working toward producing "middle ground" principles for the use of teachers and administrators. Wann (48) reported that teachers found participation in action research time consuming, difficult, and confusing during periods when hypotheses needed redefining. Teachers sometimes felt inadequate from lack of research skills. In spite of these difficulties, they felt that participation was beneficial because they changed their ways of teaching voluntarily, were pleased to have taken part in research, and tended to transfer the systematic approach to other tasks.

The criticism of action research by Wiles (49) merits consideration. He pointed out that action research is so loosely defined that it overlaps evaluation, inservice training, and cooperative research, and falls short of meeting some criteria of research, especially in universality and objectivity. Moore and Stendler (36) summarized criticisms of action research by pointing out that too often evidence is scanty and unreliable, that most basic problems are assumed to be already solved, and that there is an oversimplification of problems of perception and motivation.

Everett (16) pointed out that no one has a corner on curriculum research, not even the universities, and therefore the teachers should be included in forthcoming research of whatever type it may be. This demands that time be allotted to teachers for curriculum research. Shane (44) stated that educational leaders, despite the problems involved, must facilitate the application of research findings. However, Derthick (14) cautioned that before administrators respond too enthusiastically, they should gain perspective in viewing the many issues in curriculum research. The effort at Wells High School in Chicago (41) illustrated the attempt to keep theory ever as a guide to method. Everett (16) recommended that more consultants be supplied; and Hamilton (25), that a corps of "curricular engineers" be formed. Wrightstone (50) observed that it would be better if the research specialist were responsible to both the university and the public-school system so that he could act as a guide in planning, designing, and conducting curriculum research and yet at the same time be rooted in a real situation for which he is responsible.

Suggestions for making research more available were that an agency be created to pool findings and that greater cooperation be encouraged among

the several national research associations (4). It was also suggested that greater use be made of the already existing scattered sources (22). Societies interested in curriculum improvement could help in this coordination. Efforts in this direction are being made by the Association for Supervision and Curriculum Development and Phi Delta Kappa. Such societies might supply voluntary consultants and expedite communication among those doing curriculum research. Perhaps graduate curriculum research should be geared into national or regional programs and thereby gain continuity and contributive value.

When curriculum research is completed, it should be communicated with alacrity, be well organized, and written so that it can be easily interpreted. Moreover, Aiken (2) stated that there must be vertical communication. He pointed out that one of the faults of the Eight Year Study was that elementary-school and college officials were not kept sufficiently informed. Also, selective reading would enable teachers and administrators to keep posted on research. Broadus (7) made a study of the sources of educational research and found that the bulk of the material is included in a few periodicals, which can be regarded as basic references.

Administrators said that the reporting of curriculum research should be "pointed, graphic, and in language adapted to lay understanding" (31). But Borg (6) warned that the cure for poor implementation does not consist solely of skilful reporting; it demands rather the proper education of future teachers. He pointed out that would-be teachers must be weaned from textbooks that report little research and are often out of date before they are used. The students must be given some familiarity with research periodicals to acquaint them with the primary sources and with the fact that their problems are under constant research. Of course the community must be kept informed and brought into participation with the schools and the universities if curriculum research is to become effective.

Conclusions

Curriculum research seems to be seeking its conceptual bases and its technics outside the immediate field of education, perhaps because views of the school in society are being re-evaluated.

Technics being developed in the behavioral social sciences need specific adaptation to curriculum research.

There is discontent with imprecision of thought in general, yet wider participation in research is called for, as is better communication of the results of research. These divergent needs might find their resolution in the development of far more sophisticated technics than are now available.

Action research offers an opportunity to use insights from other fields and to avoid the dangers of the panacea approach. However, the trend in the literature of action research suggests the need for caution in two ways: the negative results of action research projects should be reported as well

as the successful ones; and a separation should be made between action research and group process findings, in spite of their close alliance.

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SUPPLEMENTARY DIRECTORY

(The latest complete membership list was published in the December 1953 issue of the REVIEW. The following list indicates new members since that date.)

Aaron, Ira E., Acting Director, Bureau of Educational Studies and Field Services, College of Education, University of Georgia, Athens, Georgia.

Abrahamson, Stephen, Assistant Professor of Education, University of Buffalo, 3435 Main Street, Buffalo, New York.

Adams, Harold P., Assistant Director, Bureau of School Service, College of Education, University of Kentucky, Lexington, Kentucky.

Almy, Millie, Associate Professor of Education, Department of Developmental Psychology, Teachers College, Columbia University, New York 27, New York.

Anderson, Gordon V., Assistant Director, Testing and Guidance Bureau, The University of Texas, P. O. Box 8017, University Station, Austin 12, Texas.

*Auble, Donavon, Instructor, School of Education, Indiana University, Bloomington, Indiana.

Austin, David B., Associate Professor of Education, Teachers College, Columbia University, New York 27, New York.

Bateman, Jessie W., Professor of Home Economics Education and Research, Texas State College for Women, Denton, Texas.

Bateman, Richard M., Director, Fort Wayne Center, Purdue University, Fort Wayne, Indiana.

* Bebell, Clifford F. S., Assistant Professor, School of Education, University of Denver, Denver 10, Colorado.

Bernard, Harold W., Associate Professor of Education, General Extension Division, Oregon State System of Higher Education, Portland 1, Oregon.

Bertrand, John R., Dean, Basic Division, A and M College of Texas, College Station, Texas.

Bliesmer, Emery P., Assistant Professor of Educational Psychology, 307 Sutton Hall, University of Texas, Austin, Texas.

Bond, Elden A., Assistant Superintendent of Schools, 1111 North 10th Street, Milwaukee 1, Wisconsin.

* Bowman, Howard A., Supervisor of Measurement and Evaluation, Evaluation and Research Section, Los Angeles City Schools, 450 North Grand Avenue, Los Angeles 12, California.

Brown, Douglass, Assistant Professor of Education, Boston University, 332 Bay State Road, Boston 15, Massachusetts.

Brown, Kenneth R., Director of Research, California Teachers Association, 693 Sutter Street, San Francisco 2, California.

Bryan, J. Ned, Jr., Assistant Professor of Education, School of Education, Rutgers University, New Brunswick, New Jersey.

Bryan, Ray, Head, Department of Vocational Education, Iowa State College, 220 Curtiss Hall, Ames, Iowa.

Bullock, James E., Reading Consultant, Apartment 6 T, 55 Glenwood Avenue, East Orange, New Jersey.

Burke, James M., Director of Research, Darien Public Schools, Renshaw Road, Darien, Connecticut.

Burton, Floyd H., Superintendent, Humble Public Schools, Box 706, Humble, Texas.

* Capps, Marian P., Professor of Education, State A and M College, Orangeburg, South Carolina.

Cartwright, William H., Professor of Education, Department of Education, Duke University, College Station, Durham, North Carolina.

Casey, John E., Assistant Professor, Psychology and Guidance, Colorado State College of Education, Greeley, Colorado.

Christ, William B., Assistant Professor of Music Education, Teachers College, University of Cincinnati, Cincinnati, Ohio.

Clark, Elmer J., Associate Professor, Indiana State Teachers College, Terre Haute, Indiana.

---

* Transferred from associate to active membership.

Clark, Edwin C., Director of Research, Burbank Public Schools, 245 East Magnolia Boulevard, Burbank, California.

Clymer, Theodore W., Assistant Professor of Education, 110 Burton Hall, University of Minnesota, Minneapolis, Minnesota.

* **Coladarci, Arthur P.,** Associate Professor of Education and Psychology, Stanford University, Stanford, California.

Colvert, C. C., Director of Research, American Association of Junior Colleges, University Station, Box 7998, Austin 12, Texas.

Connor, David Vincent, Teacher and Part-Time Lecturer, University of Queensland, 87 Swan Street, Kedron, Brisbane, Queensland, Australia.

Corbally, John E., Professor of Secondary Education, University of Washington, 202 D Miller Hall, Seattle 5, Washington.

Cox, Leonard W., Director of Pupil Services, Oklahoma City Public Schools, 1205 N. W. 14th Street, Oklahoma City, Oklahoma.

Craig, Robert C., Assistant Professor of Education, State College of Washington, Pullman, Washington.

Cremin, Lawrence A., Assistant Professor of Education, Teachers College, Columbia University, New York 27, New York.

Cruickshank, William M., Professor of Education and Psychology, School of Education, Syracuse University, Syracuse 10, New York.

Curtis, H. A., Professor of Education, Florida State University, Tallahassee, Florida.

Danielson, Paul J., Assistant Professor of Education, College of Education, University of Arizona, Tucson, Arizona.

Dawson, Dan T., Assistant Professor of Education, School of Education, Stanford University, Stanford, California.

Dean, Harris W., Professor of Education, Department of Education, Florida State University, Tallahassee, Florida.

Downie, Norville M., Associate Professor of Psychology, Psychology Department, Biology Annex, Purdue University, Lafayette, Indiana.

Drake, Richard M., Director of Institutional Research, University of Buffalo, Buffalo 14, New York.

Dyer, Henry S., Vicepresident, Research, Educational Testing Service, 20 Nassau Street, Princeton, New Jersey.

Eastmond, Jefferson N., Associate Professor of Education, School of Education, Utah State Agricultural College, Logan, Utah.

Ebeling, George William, Associate Professor, School Administration and Supervision, University of Toledo, Toledo, Ohio.

Edwards, Allen L., Professor of Psychology, Department of Psychology, University of Washington, Seattle 5, Washington.

Erviti, James R. D., Research Associate, New York State Education Department, 46 Chapel Street, Albany, New York.

Evans, Hubert M., Professor of Natural Science, Teachers College, Columbia University, New York 27, New York.

Everett, J. Bernard, Director of Instruction, Newton Public Schools, 100 Washington Park, Newtonville 60, Massachusetts.

Ewens, William P., Professor of Education, Sam Houston State Teachers College, Huntsville, Texas.

* **Fields, Ralph R.,** Director, Division of Instruction, Teachers College, Columbia University, New York 27, New York.

Flinton, Edgar W., Director of Graduate Studies, New York State College for Teachers, Albany, New York.

Frick, Herman L., Professor of Education, School of Education, Florida State University, Tallahassee, Florida.

Fruchter, Benjamin, Associate Professor of Educational Psychology, The University of Texas, Austin 12, Texas.

Gawne, John O., Director, Boston University Counseling Service, Boston University, Boston, Massachusetts.

George, N. L., Assistant Superintendent of Schools, Oklahoma City Public Schools, 400 North Walnut, Oklahoma City 4, Oklahoma.

Gibb, E. Glenadine, Assistant Professor of Mathematics, Department of Mathematics, Iowa State Teachers College, Cedar Falls, Iowa.

---

* Transferred from associate to active membership.

Gilbert, Luther C., Professor of Education, Department of Education, University of California, Berkeley 4, California.

Gilchrist, Robert S., Assistant Superintendent in Charge of Instruction, Pasadena City Schools, 351 South Hudson Avenue, Pasadena 5, California.

Goldberg, Arthur, Curriculum Coordinator, Norwich Free Academy, Crescent Street, Norwich, Connecticut.

Gray, Robert T., Director, Testing Service, Central Missouri State College, Warrenburg, Missouri.

Hagen, Elizabeth, Research Associate, Teachers College, Columbia University, New York 27, New York.

* **Hamilton, Jean F.,** Assistant Professor of Education, College of Education, Wayne University, Detroit 1, Michigan.

Harnack, Robert S., Assistant Supervisor, Curriculum Department, Milwaukee Public Schools, 1111 North 10th Street, Milwaukee 1, Wisconsin.

* **Harris, Grace M.,** Director of Research, Muskegon Public Schools, Muskegon, Michigan.

Harrison, Harold J., Assistant Principal, Miller High School, 2322 Dubois, Detroit 11, Michigan.

* **Herberg, Theodore,** Director of Testing, Research, and Curriculum, Pittsfield Public Schools, City Hall, Pittsfield, Massachusetts.

Herge, Henry C., Dean, School of Education, Rutgers University, 18 Seminary Road, New Brunswick, New Jersey.

Hilton, Ernest, Director of Elementary Education, State Teachers College, Fredonia, New York.

Holley, J. Andrew, Dean, School of Education, Oklahoma A and M College, Morrill Hall, Room 201, Stillwater, Oklahoma.

Horton, Roy E., Jr., Assistant to the Director, Division of Educational Reference, Purdue University, Lafayette, Indiana.

* **Hovet, Kenneth O.,** Associate Professor, College of Education, University of Maryland, College Park, Maryland.

Hubbard, Robert E., Research Assistant, Bureau of Educational Research, The Ohio State University, Columbus, Ohio.

* **Inabnit, Darrell J.,** Research Associate in Education, Graduate College, University of Illinois, Urbana, Illinois.

Ivins, Wilson H., Associate Professor of Education, College of Education, University of New Mexico, Albuquerque, New Mexico.

Jacobson, Willard J., Assistant Professor of Natural Science, Teachers College, Columbia University, New York 27, New York.

* **Jeffery, Harold B.,** Director of Research, Seattle Public Schools, 815 Fourth Avenue North, Seattle 9, Washington.

Johnson, Donovan A., Associate Professor of Education, University of Minnesota, Minneapolis 14, Minnesota.

Johnson, Leighton H., Assistant Professor of Education, College of Education, University of New Mexico, Albuquerque, New Mexico.

Jones, Dilys M., Language Arts Supervisor, Whitemarsh Township, 5203 Wayne Avenue, Philadelphia 44, Pennsylvania.

Junge, Charlotte W., Associate Professor of Education, Wayne University, Detroit 1, Michigan.

Kaiser, Arthur L., Associate Professor, School of Education, University of Buffalo, Buffalo 14, New York.

Karnes, John W., Jr., Assistant Professor of Industrial Education, School of Education, University of Connecticut, Storrs, Connecticut.

Keislar, Evan R., Assistant Professor of Education, Department of Education, University of California, Los Angeles 24, California.

Kennedy, Leo R., Professor and Head, Department of Education, Creighton University, 2500 California Street, Omaha, Nebraska.

* **Kress, Roy Alfred, Jr.,** Coordinator, Institute Services and Supervisor, Reading Analysis Division, The Reading Clinic, Temple University, Philadelphia 22, Pennsylvania.

Kropp, Russell P., Assistant Professor of Education, School of Education, Florida State University, Tallahassee, Florida.

---

* Transferred from associate to active membership.

Landry, Herbert A., Acting Director, Bureau of Administrative and Budgetary Research, Board of Education, 110 Livingston Street, Brooklyn 1, New York.

Law, Reuben D., Dean, College of Education, Brigham Young University, Provo, Utah.

* **Lewis, Hazel M.,** Director of Research, Stockton Unified School District, 324 North San Joaquin Street, Stockton 2, California.

Liu, Bangnee Alfred, Head, Statistical Division, United Nations Educational, Scientific and Cultural Organization, 19 Avenue Kleber, Paris, France.

MacRae, John M., Assistant Professor of Psychology, University of Omaha, Omaha, Nebraska.

Marriott, John C., Test Consultant, Test Division, World Book Company, Yonkers-on-Hudson, New York.

McClurkin, W. D., Director, Division of Surveys and Field Services, George Peabody College for Teachers, Nashville 4, Tennessee.

McKillop, Anne Selley, Associate Professor of Education, Teachers College, Columbia University, New York 27, New York.

Medley, Donald M., Instructor and Research Associate, Institute of Educational Research, Indiana University, Bloomington, Indiana.

Meece, Leonard E., Professor, Educational Administration, University of Kentucky, Lexington, Kentucky.

Mosier, Earl E., Dean of Professional Education, Michigan State Normal College, Ypsilanti, Michigan.

Moynihan, James F., S. J., Professor of Psychology and Education, Boston College, Chestnut Hill 67, Massachusetts.

** **Munves, Elizabeth D.,** Assistant Professor, School of Education, New York University, Washington Square, New York 3, New York.

Murphy, Harold D., Graduate Assistant in Psychology, George Peabody College for Teachers, Nashville, Tennessee.

Nason, Doris E., Assistant Professor of Education, University of Connecticut, Box U-33, Storrs, Connecticut.

Nelson, Kenneth G., Assistant Professor of Education, Michigan State College, East Lansing, Michigan.

Nesi, Carmella, Principal, Junior High School 7, The Bronx, 3201 Kingsbridge Avenue, Bronx 63, New York.

Newman, Slater E., Research Psychologist, Human Resources Research Center, University of Mississippi, 2944 Currie Street, Biloxi, Mississippi.

Norris, Raymond C., Instructor in Psychology, Department of Psychology, George Peabody College for Teachers, Nashville, Tennessee.

Overturf, Donald S., Dean of Admissions and Records, New Mexico Western College, Silver City, New Mexico.

Owings, Ralph S., Head and Professor of Educational Administration, Mississippi Southern College, P. O. Box 395, Station A, Hattiesburg, Mississippi.

Payne, Joseph C., Educational Research Consultant, Indianapolis Public Schools, 150 North Meridian Street, Indianapolis 4, Indiana.

Polster, Arthur H., Assistant Superintendent, Sacramento City Unified School District, P. O. Box 2271, Sacramento 10, California.

Price, Robert Diddams, Associate Professor of Education, Teachers College, University of Cincinnati, Cincinnati 21, Ohio.

Rasmussen, Elmer M., Dean, Dana College, Blair, Nebraska.

Reid, Jackson B., Assistant Professor of Educational Psychology, University of Texas, Sutton Hall 311, Austin, Texas.

§ **Richter, Charles O.,** Assistant Superintendent, Newton Public Schools, Newtonville 60, Massachusetts.

Rundquist, Richard M., Assistant Professor of Education, Guidance Bureau, University of Kansas, Lawrence, Kansas.

* **Rutherford, Jean M.,** Instructor, School of Education, Syracuse University, Syracuse 10, New York.

Scarborough, Barron B., Director, Bureau of Testing and Research, DePauw University, Greencastle, Indiana.

---

* Transferred from associate to active membership.
** Transferred from student affiliate to active membership.
§ Reinstated.

Schaefer, Robert Joseph, Assistant Dean, Graduate School of Education, Harvard University, Cambridge 38, Massachusetts.
Scott, William Owen Nixon, Assistant Professor, College of Education, University of Georgia, Athens, Georgia.
Shay, Carleton B., Director of Testing, Santa Monica High School, 12567 Everglade Street, Venice, California.
Smith, Alexander F., Instructor in Education, Murkland Hall, University of New Hampshire, Durham, New Hampshire.
* **Smith, Allan B.,** Bureau of Educational Research and Service, University of Connecticut, Storrs, Connecticut.
Smith, Donald E. P., Chief, Division of Reading Improvement Services, Bureau of Psychological Services, University of Michigan, Ann Arbor, Michigan.
Smith, Herbert A., Director, Bureau of Educational Research and Service, University of Kansas, Lawrence, Kansas.
Sochor, E. Elona, Supervisor, Reading Clinic Extension, Temple University, Philadelphia, Pennsylvania.
* **Spaney, Emma,** Assistant Professor, Department of Psychology, Queens College of the City of New York, Flushing, New York.
Spaulding, Seth J., Fundamental Education Program Specialist, Pan American Union, Washington 6, D. C.
Stecklein, John E., Research Associate, University of Minnesota, 211 Burton Hall, Minneapolis 14, Minnesota.
Stinnett, T. M., Executive Secretary, National Commission on Teacher Education and Professional Standards, National Education Association, 1201 Sixteenth Street, N. W., Washington 6, D. C.
§ **Tate, Merle W.,** Associate Professor, School of Education, University of Pennsylvania, Philadelphia 4, Pennsylvania.
Taylor, Hazel E., Director of Testing, East Carolina College, Greenville, North Carolina.
Thomas, Maurice J., Professor of Education, University of Pittsburgh, 2528 Cathedral of Learning, Pittsburgh 13, Pennsylvania.
Thurstone, Thelma Gwinn, Professor of Education, University of North Carolina, Chapel Hill, North Carolina.
Tully, Marguerite, Supervisor, Psychological Department and School Clinic for Problem Children, Department of Public Schools, 20 Summer Street, Providence 2, Rhode Island.
Tyler, Frederick T., Professor of Education, University of California, Berkeley 4, California.
Voges, Bernard H., Assistant Director of School Finance, Missouri State Board of Education, P. O. Box 480, Jefferson City, Missouri.
Vosk, Marc, Director of the Scientific Research Department, American Jewish Committee, 386 Fourth Avenue, New York 16, New York.
Weeks, Harold L., Supervisor of Research, San Bernardino City Schools, 799 F Street, San Bernardino, California.
Wellck, A. A., Director, Counseling and Testing Services, University of New Mexico, Albuquerque, New Mexico.
West, Leonard J., Research Psychologist, Human Resources Research Center, 6563d Research and Development Group, Chanute Air Force Base, Illinois.
* **Wheeler, Lester R.,** Director of Reading Clinic, University of Miami, Coral Gables, Florida.
Whipple, Gertrude, Associate Professor of Education, College of Education, Wayne University, Detroit 1, Michigan.
Wiggin, Gladys A., Professor of Education, College of Education, University of Maryland, College Park, Maryland.
Williams, Wilbur Allen, Associate Professor of Education and Psychology, Michigan State Normal College, Ypsilanti, Michigan.
Wochner, Raymond E., Professor of Education, Arizona State College, Box 34, Tempe, Arizona.

---

* Transferred from associate to active membership.
§ Reinstated.

ASSOCIATE MEMBERS

Keck, Winston B., Curriculum Coordinator, School Department, Administration Building, New Britain, Connecticut.

Keller, William E., Assistant Superintendent of Schools, Town School Office, Westport, Connecticut.

Pesin, Byron I., Teacher, Birmingham Junior High School, 6451 Balboa Boulevard, Van Nuys, California.

Scott, Mildred C., Director of Elementary Education, Parma Public Schools, 5401 West 54 Street, Parma, Cleveland 29, Ohio.

Thompson, Ruby Mae, Assistant Director, Division of Administration and Finance, State Department of Education, Jackson, Mississippi.

STUDENT AFFILIATES

Barry, Ruth E., Teachers College, Columbia University, New York 27, New York. (Mailing address: 400 West 119th Street, Apartment 1-T, New York 27, New York.)

Belleau, Wilfrid E., University of Wisconsin, Madison, Wisconsin. (Mailing address: 4141 West Vliet Street, Milwaukee 8, Wisconsin.)

Boyer, E. Gil, Teachers College, Columbia University, New York 27, New York. (Mailing address: Apartment 203, Sarasota Hall, 512 West 122nd Street, New York 27, New York.)

Crook, Frances E., Teachers College, Columbia University, New York 27, New York. (Mailing address: 313 Park Hill Avenue, Yonkers, New York.)

Curran, Mary Elizabeth, Boston University, Boston 15, Massachusetts. (Mailing address: 15 Kensington Avenue, Bradford, Massachusetts.)

Early, Margaret, School of Education, Boston University, Boston, Massachusetts. (Mailing address: 79 Quincy Street, Dedham, Massachusetts.)

Fierman, Morton C., Arizona State College, Tempe, Arizona. (Mailing address: Temple Beth Israel, Tenth Avenue and Flower, Phoenix, Arizona.)

Gawkoski, Roman Stephen, Teachers College, Columbia University, New York 27, New York. (Mailing address: 150 North Fifth Street, Clinton, Iowa.)

Goldhammer, Keith, School of Education, University of Oregon, Eugene, Oregon. (Mailing address: School of Education, University of Oregon, Eugene, Oregon.)

Goodman, Joan Lois, Teachers College, Columbia University, New York 27, New York. (Mailing address: 540 West 122nd Street, New York 27, New York.)

Grudel, Regina, Teachers College, Columbia University, New York 27, New York. (Mailing address: 1—74th Street, Brooklyn 9, New York.)

Orr, David B., Teachers College, Columbia University, New York 27, New York. (Mailing address: 509 West 121st Street, New York 27, New York.)

Rohan, William, Northwestern University, Evanston, Illinois. (Mailing address: 5217 West Newport Avenue, Chicago 41, Illinois.)

LIST OF ACTIVE MEMBERS BY STATES

Arizona
Danielson, Paul J.
Wochner, Raymond E.

California
Bowman, Howard A.
Brown, Kenneth R.
Clark, Edwin C.
Coladarci, Arthur P.
Dawson, Dan T.
Gilbert, Luther C.
Gilchrist, Robert S.
Keislar, Evan R.
Lewis, Hazel M.
Polster, Arthur H.
Shay, Carleton B.
Tyler, Frederick T.
Weeks, Harold L.

Colorado
Bebell, Clifford F. S.
Casey, John E.

Connecticut
Burke, James M.
Goldberg, Arthur
Karnes, John W., Jr.
Nason, Doris E.
Smith, Allan B.

District of Columbia
Spaulding, Seth J.
Stinnett, T. M.

Florida
Curtis, H. A.
Dean, Harris W.
Frick, Herman L.
Kropp, Russell P.
Wheeler, Lester R.

Georgia
Aaron, Ira E.
Scott, William Owen Nixon

Illinois
Inabnit, Darrell J.
West, Leonard J.

Indiana
Auble, Donavon
Bateman, Richard M.
Clark, Elmer J.
Downie, Norville M.
Horton, Roy E., Jr.
Medley, Donald M.
Payne, Joseph C.
Scarborough, Barron B.

Iowa
Bryan, Ray
Gibb, E. Glenadine

Kansas
Rundquist, Richard M.
Smith, Herbert A.

Kentucky
Adams, Harold P.
Meece, Leonard E.

Maryland
Hovet, Kenneth O.
Wiggin, Gladys A.

Massachusetts
Brown, Douglass
Everett, J. Bernard
Gawne, John O.
Herberg, Theodore
Moynihan, James F.
Richter, Charles O.
Schaefer, Robert Joseph

Michigan
Hamilton, Jean F.
Harris, Grace M.
Harrison, Harold J.
Junge, Charlotte W.
Mosier, Earl E.
Nelson, Kenneth G.
Smith, Donald E. P.
Whipple, Gertrude
Williams, Wilbur Allen

Minnesota
Clymer, Theodore W.
Johnson, Donovan A.
Stecklein, John E.

Mississippi
Newman, Slater E.
Owings, Ralph S.

Missouri
Gray, Robert T.
Voges, Bernard H.

Nebraska
Kennedy, Leo R.
MacRae, John M.
Rasmussen, Elmer M.

New Hampshire
Smith, Alexander F.

New Jersey
Bryan, J. Ned, Jr.
Bullock, James E.
Dyer, Henry S.
Herge, Henry C.

New Mexico
Ivins, Wilson H.
Johnson, Leighton H.
Overturf, Donald S.
Wellck, A. A.

New York
Abrahamson, Stephen
Almy, Millie
Austin, David B.
Cremin, Lawrence A.
Cruickshank, William M.
Drake, Richard M.
Erviti, James R. D.
Evans, Hubert M.
Fields, Ralph R.
Flinton, Edgar W.
Hagen, Elizabeth
Hilton, Ernest
Jacobson, Willard J.
Kaiser, Arthur L.
Landry, Herbert A.
Marriott, John C.
McKillop, Anne Selley
Munves, Elizabeth D.
Nesi, Carmella
Rutherford, Jean M.
Spaney, Emma
Vosk, Marc

North Carolina
Cartwright, William H.
Taylor, Hazel E.
Thurstone, Thelma Gwinn

Ohio
Christ, William B.
Ebeling, George William
Hubbard, Robert E.
Price, Robert Diddams

Oklahoma
Cox, Leonard W.
George, N. L.
Holley, J. Andrew

Oregon
Bernard, Harold W.

Pennsylvania
Jones, Dilys M.
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Tate, Merle W.
Thomas, Maurice J.

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Texas

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Bertrand, John R.
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Burton, Floyd H.
Colvert, C. C.

Ewens, William P.
Fruchter, Benjamin
Reid, Jackson B.

Utah

Eastmond, Jefferson N.
Law, Reuben D.

Washington

Corbally, John E.
Craig, Robert C.
Edwards, Allen L.
Jeffery, Harold B.

Wisconsin

Bond, Elden A.
Harnack, Robert S.

FOREIGN

Australia

Connor, David Vincent

France

Liu, Bangnee Alfred

LIST OF ASSOCIATE MEMBERS BY STATES

California

Pesin, Byron I.

Connecticut

Keck, Winston B.
Keller, William E.

Mississippi

Thompson, Ruby Mae

Ohio

Scott, Mildred C.

LIST OF STUDENT AFFILIATES BY STATES

Arizona

Fierman, Morton C.

Illinois

Rohan, William

Iowa

Gawkoski, Roman Stephen

Massachusetts

Curran, Mary Elizabeth
Early, Margaret

New York

Barry, Ruth E.
Boyer, E. Gil
Crook, Frances E.

Goodman, Joan Lois
Grudel, Regina
Orr, David B.

Oregon

Goldhammer, Keith

Wisconsin

Belleau, Wilfrid E.

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